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JOURNAL.

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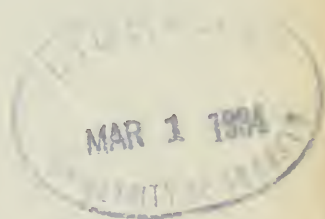
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
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
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
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Original Contributions.

ARTICLE XXXV.

GENESIS.—V. By HIRAM CHRISTOPHER, M. D., of St. Louis, Mo.

The mental and moral faculties do not exhaust the psychical nature of living beings. They do not exhaust the nature of the life-agent as this is displayed in the psychical phenomena of animals. There is yet another manifestation of this nature, the development of a higher psychical attribute, whose phenomena are prophetic of a higher realm of being—the assurance, indeed, of another state of existence into which man will yet pass, thus demonstrating still more clearly and certainly the foreign source of the life-agent, of whose true nature this attribute gives the highest and the finally conclusive evidence. This attribute we call the religious sense or feeling, so apparently characteristic of man, but really common to the purely animal nature. This claim for the animal may seem still more startling, and yet it is a legitimate conclusion from the premises of the modern scientist. We know that man has a religious nature, and if he is but an animal, the creation of the physical forces, as is claimed by these modern scientists, a religious nature cannot be denied to animals, though in most of them it may be very obscure. But it is not more obscure in the higher species than is the mental nature in

the lowest. As the mental and moral natures in man and animals have the same origin or basis, the conclusion is necessary, that any difference that may be observed between them is not to be attributed to a different nature, but to the grade of organic development, through and by means of which psychical phenomena are manifested. The plane of mental phenomena appears first, then that of the moral, and lastly that of the religious. Facts establish this order of sequence. They appear as the organism is suited for their manifestation. So that we have only to consider the religious sense or nature as the ultimate development which the life-agent makes of itself through a living organism, in order to see that one nature is as truly an attribute of the life-agent as the other. For, however surprising it may be thought to be that the religious sense is an attribute of animals, a faculty of their psychical nature, it would be far more surprising if such were not the fact. All these natures or faculties rest on the same basis, and are attributes of one and the same power or agent. They appear coetaneous with organic development because a certain development of structure is necessary to their development respectively. It is, therefore, plain to see that the presence or absence of either one or all of these faculties from a living organism is to be ascribed to the grade of the organism. The religious sense appears toward the human end of the animal series, because there the animal organism has attained the necessary development. These facts being incontrovertible, the conclusion is evident and necessary, that the mental, moral, and religious natures rest on, and proceed from, one common basis or nature of which they are inherent attributes.

This conclusion is a logical necessity, but it would have but little, if any, force as an argument, for the existence of a religious nature in animals, if such a nature were not perceptible in them. We should distinguish between the moral and religious natures. In general the distinction is very apparent; but in some cases the moral shades so gradually into the religious that the line of demarkation becomes very dim. The love, for instance, that belongs to the moral nature—the love of a subject for his king—can hardly be distinguished from the love that borders on, or reaches, reverence. So as regards the love of the young for the aged. It is not the love of the child for his parent, but rather like that of an inferior for one regarded as superior. Such a love has in it something of the element of rever-

ence which belongs to the religious nature. The attachment of friendship is almost as conspicuous in animals as in man. The difference is to be found only in the degree with which the feeling is felt and its consequent duration, or in the manner in which it is expressed. The grade of organic development is, *ceteris paribus*, the measure of the manifestation of this and all other faculties, feelings, and attachments observed in animals,—the measure and means of the life-agent's development of his nature. The attachment of the dog for his master is not only of the moral nature of love, but approximates very closely the feeling of reverence in man, if it be not actually identical with it. It is most probably the same sentiment in a lighter or feebler degree. It may, indeed, be more than this; for few men ever manifest such a degree of reverence for the Deity as does the dog for his master. In this respect he is an example for his more highly endowed master, whose cheek should crimson with shame when he contemplates the devotion of his humble companion. So strong and conspicuous is this devotion of the dog for his master, that men in every age of the world, and in every country, have observed and admired it. The cultivated Greek noted it, and from the evident devotion of the dog for his master, formed one of the most expressive words of his language; a word which expresses the reverence of the servant for his master, the inferior for his superior, and man for his Lord—*proskuneo*, to reverence or worship. We may, therefore, regard it as an unquestionable fact, that animals have a religious nature in common with man, and, consequently, that a religious nature inheres in the power that gave origin to the animal kingdom.

The *terminus ad quem* for this nature in animals is man, since he is, in all essential particulars, their superior. We know that he is as respects the dog, and as this animal is, of all animals, the most highly endowed in this respect, man may be placed as the *terminus* of all the higher feelings and affections of the animals associated with him. But who or what is the object of man's reverence or religious adoration? On whom does the exercise of his religious faculty terminate? This question directs our attention still in a forward direction—points us to an object still beyond us and before us, and suggests that the power which planted in man this feeling or nature, had the foresight of purpose, and the precision of design; that the life-agent possessed a mind of wonderful reach and grasp, and capable of the grandest

designs that ever mind contemplated, or conceived of; designs that required means for their realization, attainable only by one infinitely fertile in resource, and omnipotent in power. But further.

To the moral nature belongs the feeling of shame, and shame comes from a consciousness of wrong-doing. It is the feeling of a smitten conscience. This feeling is conspicuous in man, but is not peculiar to him. It ought to be found in animals that clearly manifest a moral nature. If we observe closely the conduct of the dog while under the displeasure of his master, we cannot fail to see that his actions indicate that he is ashamed of what he had done that offended his master. He is conscious of having done wrong, and shows that he is ashamed of it. This appears in his actions—in the expression of his features, in the motion and position of his body and limbs; his tail is drawn under him; he crouches to the ground, and shows in the expression of his eyes, that he is deeply ashamed of what he has done. His conduct can be explained on no other hypothesis. He skulks away because he fears punishment, and feels that he deserves it.

At the point of shame the moral nature shades into the religious. It proves the consciousness of wrong-doing, and from this there is a looking up to a superior for pity. Can we conceive of an action that more earnestly and expressively pleads for pity than do the actions of the dog when he crouches at the feet of his master, dreading his displeasure? From reverence comes this pleading for mercy, and in such a petition shame and reverence meet. Here the two natures show their identity and community of origin.

As shame begets the fear of punishment, we have in this fact the development of another psychical faculty of the animal nature—*anticipation*. This looks forward only. Its object lies in the future, whether near or distant. In the animal it is mostly the near. The beaver is said to build his dam sometimes on a higher level than before, in anticipation of a more than usual high water. This may be the impulse of what is called instinct. Be it what it may, the action is based on anticipation, though the animal is hardly conscious of the feeling at the time. But the fear of punishment on the part of the dog is felt. It is the anticipation of a near event. Whether anticipation in mere animals is a matter of consciousness as respects events more distant than

the near future is very doubtful ; but whether so or not, the fact proves the existence of such a faculty in the animal mind, and this is all we desire at present.

Anticipation is excited by events expected, and events are expected because of information in possession of the party. We know not how or why the beaver anticipates an unusual rise of the stream on whose banks he builds his home ; but the dog anticipates punishment because he has learned by experience that it will follow his wrong-doing. We have no reason for supposing that the animals below man have, from any source of information open to them, the anticipation of an event that lies beyond the immediate future. They cannot unless they have the necessary knowledge from a source besides their own experience. Such knowledge they have not, nor are they capable of appreciating such information if it should be given. They can have no conception of a future state of existence, and hence they cannot have such an anticipation. They have not the knowledge necessary to excite such an anticipation, and cannot have. Hence such a conception as a future state of existence, or the anticipation of such a life, is impossible to the mere animal.

But man has the conception of such a state of existence. He believes that he will live somewhere else after the death of his body. He anticipates a life beyond the grave. He has the knowledge of such a state, or believes he has. The majority of the civilized world believes this. Whence, then, the source of the information which gives origin to the conception, and excites the anticipation of a future life ? There can be but three sources of this information : (a) From a supernatural or divine revelation ; (b) from intuition of the personal spirit-being which temporarily inhabits the animal body, or (c) from intuition of the animal mind. The modern scientist will reject the first two as not within the province of science, which is true, if he means physical science. But a denial of these sources of information does not help him out of the difficulty. The fact that man anticipates living beyond death is not pushed aside by denial. It is a phenomenon that man submits for explanation, and the scientist must explain its origin. According to his views as to the origin of living beings, and the nature of psychical phenomena, he must say that the knowledge is an intuition of the animal mind. This being so, we have physical forces creating a mechan-

ism out of the atoms of dead matter with powers of mind capable of the conception of a future state of existence, and of attaining, of themselves, the knowledge of such a state. What difficulties and inexplicable mysteries seem to accumulate around the theory that physical agents are the authors of such strange phenomena!

We may admit intuitive knowledge for man as respects axioms or self-evident truths; but is the knowledge respecting the existence of man beyond the grave, intuitive? No one asserts or believes that it is. Then whence the conception and the belief of the supposed fact? The information that has excited the anticipation, and planted the belief in the mind of man, must have been imparted by one who knows the fact. There is no other possible source from which the information could have come. But this is denied by the modern scientist. He is, therefore, confronted with a fact which he cannot explain, nor deny.

Animals have an instinctive fear of one another, a feeling implanted in their nature for their personal protection by means of escape. Such a feeling is organic, and has no connection with the volition. It is inherent, not acquired. There is a wide difference, however, between instinct and intuition, though neither has any connection with, or dependence on, volition. There is abundant evidence of the existence and action of instinct in animals, but none whatever of intuition. Why they fear, therefore, is to be explained on the ground of instinct, or imparted knowledge. The dog fears punishment from his master, not by instinct, but from a knowledge of the past. He apprehends what the action of his master will be when he has displeased him, because he remembers what it was in the past. Then having the faculty of anticipation, that faculty is excited by imparted knowledge. The same is true of man. His instinct and intuition can give him no knowledge of what will happen in the distant future. For all knowledge of this kind he is essentially dependent on information; and hence the anticipation on the part of man as respects a future state of existence—universal with the race—can arise only from imparted information. This is a fact that needs explanation, and as the scientist has no means of giving it, he must confess that there are phenomena which his theories do not, and cannot explain.

The scientist cannot complain of the introduction of this argument in the discussion as irrelevant, or deny its right to

consideration as a legitimate question of science. He has affirmed that *all* psychical faculties are but the *powers* of a material mechanism, created or generated by physical forces, and purely organic results of these agents, and if his science cannot explain *all* the phenomena presented by human beings, he should confess its inability, and be willing to receive a higher generalization as to creative powers than what is presented by the physical world. If we shut out all other light, we leave unexplained a psychical phenomenon of no little importance. The modern scientist confidently affirms that all art, poetry, philosophy, and science arise from a power or force that had its origin in the fires of the sun, and was identical as to nature, with the heat that ignited the combustible material of our once burning world, and there is, hence no escape from the conclusion that anticipation, as a faculty of the mind, is a legitimate product of the same physical force or agent, and that the knowledge which excites this faculty to look forward to a future state of existence, is either instinctive or intuitive, or within the phenomenal.

From this we may take another step forward, and introduce the beliefs of mankind as phenomena that call for explanation on the theory held by modern scientists. Belief is based on testimony. The beliefs of mankind, which come of imparted knowledge—from knowledge unattainable by human effort, and beyond the domain of the phenomenal—*when they bear on the question of man's genesis and nature*, are legitimate subjects of scientific investigation; as much so as are the psychical faculties and phenomena of animals and man. If these are the product of a force akin to that which forms the crystal or salt, they are as truly subjects of scientific research as are these physical bodies. Mankind anticipates, and believes in a future state of existence. This is a fact to be explained. The dog anticipates and fears punishment, being conscious of wrong-doing as respects his master. The knowledge that excites the faculty and arouses his fear, is derived from his personal experience. It is not instinctive nor intuitive, but imparted. The knowledge which has excited the faculties in man, and aroused his hopes or fears, is also imparted; it is not instinctive nor intuitive. The knowledge of the animal came from his master; the knowledge which man has of a future state of existence must have come from one who knows the fact. It will not be claimed that physical agents or forces have this knowledge, nor that the phenom-

ena of nature have even suggested it. Whether, as a fact, man has this knowledge from without; whether as a fact this knowledge has come to him from a supernatural source, it is neither our province, nor duty to prove. We simply urge the *fact* that mankind do anticipate living after death; that they have hopes and fears respecting their destiny beyond the grave, and argue from this fact that there must be in him something that *can* live and *will* live after his body has utterly perished.

The scientist may insist that the anticipation of a future life is but a dream or a superstition. Be it so; he has then another difficulty on his hands, and equally impossible of explanation—whence or how the *universality of the dream or superstition*, and that, too, by the best minds, pagan as well as christian, that have ever adorned our nature? To object is not to explain. Here we have a psychical faculty and a psychical phenomenon. If *all* psychical faculties and phenomena proceed from the molecular action of atoms, or from the *functions* of an atomic organism, the former cannot be excluded from the latter, or discarded as not phenomenal, and beyond the field of scientific investigation.

The universal belief of mankind, (always excepting, by courtesy, those who believe they are naught but developed monkeys,) is, that man is not only an animal, essentially the same as the animals below him in the graded series; but that he is also a spirit-being; that there dwells in his animal organism during its life, a spirit-being, who will survive the death of the animal, and live elsewhere, in a state now invisible to us. Now, until the scientist shall satisfactorily explain this fact, and on the principles of his science, we are justified in assuming as a fact that there is in man a being who will survive the death of his body. The hopes and fears of mankind; the anticipation of a future life by the best minds of our race, demand such a constitution for man in his entirety; and as the assumption, necessitated by the expectation, explains all the facts involved in the supposition, we are justified in believing that man is more than an animal.

Now, as we have a spirit-being in man, who will live after the death of the animal organism, may we not ask this "cosmic vapor" school of scientists, Whence this personal being capable of an existence independent of the body? Whence its genesis, and how came it into the animal organism? Was it "the cosmic

vapor" or "fires of the sun" in conjunction with the life agent, that built up the animal organism, and awaiting the time when physical forces should deem it time to prepare and make for it a body? Or was it there in an impersonal form, nebulous or vapory, an invisible and an amorphous essence awaiting the day when refrigeration or cohesive attraction should condense it into the personality in which it appears in man, and then draw it into his body? This, or something like it must be conjectured or assumed, if man in all his entirety is the creation of physical agents, and his psychical phenomena purely the result of molecular activity.

The absurdities into which false views drive us, are proof of the fallibility of human reason, and give a warning that should not pass unheeded. There are difficulties presented by the phenomena of the world, which reason cannot remove; facts which it cannot explain; and problems which it cannot solve by scientific methods. There is such a thing as belief based on testimony, and there is testimony which consists of insoluble facts; and our highest reason demands that we shall believe and receive the latter as established, when the testimony is ample and competent.

This strange unbelief under so much infallible light, is itself a psychical phenomenon of no insignificant character. Is the question as to the genesis of the organic world so environed with difficulties, and so involved in doubt, as to be unknowable? As the scientist has failed in all his efforts to prove the creative power of physical forces, and uniformly and invariably failed; and since we have information which thousands of men of the highest attainments and greatest ability believe to be true and authentic, and which dissipates all doubt that can hang over the subject, why should the scientist still persist in holding to theories which cannot bear the test of reason? Is it perversity, or honest skepticism? Does the scientist ever find such phenomena as these in the play of physical forces? Are they capable of such action? He knows they are not; and yet he can see no specific or categorical difference between physical and psychical phenomena.

The stream cannot rise above the level of its source. This the scientist knows and teaches. He knows it to be a physical impossibility. And there cannot be in the effect what was not potentially in the cause. This the scientist also knows is equally true. Profs. Huxley and Tyndall affirm this as true and, indeed,

necessary, when they declare that mind is the legitimate product of the action of physical agents; that the dynamic forces active in "the fiery mist," were truly and really the originative and generative source of all phenomena, physical and psychical, that appear in the two great departments of this mundane system. As respects the latter kingdom, the theory of evolution fails at its initial points—spontaneous generation—and is, therefore, untrue in every particular. On the contrary, the view that assigns all existence, and all phenomena of all worlds to one infinitely intelligent, wise, and powerful Being, himself unoriginated, self-existent, and eternal, not only meets and satisfies all the demands of the problem, but shows by the facts on which the view is based that no different view can be true. It embraces and accounts for all facts and all phenomena that have ever, or will ever, come under the observation of men, and disposes of all difficulties which infinite variety and complexity have occasioned in the minds of men. What phenomena it leaves unexplained, or questions unsettled, we may consider as not within the limits of finite intelligence. That there are such phenomena and questions may be readily admitted, since all things are not possible to the finite mind. But explaining all, and settling all that are within man's grasp and understanding, reason and every principle of science demand that the hypothesis of an intelligent creator, shall be accepted as ending all controversy respecting the genesis of the material and organic worlds, and all their phenomena.

ARTICLE XXXVI.

THE PRESENT STATUS OF THE PATHOLOGY OF PHTHISIS PULMONALIS.—By J. HILGARD TYNDALE, M. D., of New York City.

DESQUAMATIVE PNEUMONIA.

The name of "desquamative pneumonia" will no doubt sound strange. I will introduce it by stating that its existence, as a separate form of lung trouble, was first mentioned by Prof. Buhl, of Munich (see Hale and Pfeuffer's Journal, series viii. 1856).

While its existence as a distinct and separate disease has been, at times, tacitly acknowledged by others, Buhl alone, as far as I can ascertain, has furnished the literature of its pathology and pathological anatomy. In the present paper on desquamative pneumonia, I can only endeavor to collect his thoughts and reproduce them in condensed form.

Desquamative pneumonia occurs in three grades and modifications, each one of which will be separately considered.

The *first* variety, and the one of lowest grade, is that which occurs as an *accompaniment to severe general diseases*, and is therefore denominated by Buhl as "*consecutive desquamative pneumonia*." It is chiefly an accompaniment of acute infectious diseases, but the introduction of any inorganic poison into the body, as pyæmia, etc., form the basis of this first variety of desquamative pneumonia. The pathological changes in other organs in connection with general diseases are spoken of as parenchymatous inflammations, such as parenchymatous nephritis, hepatitis, and it would seem rational to allow the existence of parenchymatous pneumonia, though this term is not now in vogue. In consulting other authors, it will be found that they speak merely of hyperæmia, hypostatic congestion and œdema of the lungs in connection with infectious diseases, but the pathological anatomy of the process seems to have often been supposed to be that of croupous pneumonia. I find it stated, with strange uniformity, that pneumonia accompanying typhoid fever is croupous, and originates under the same influences as does catarrh of the air-passages in measles, without any reference to the existing pathological condition, which corresponds to our desquamative form and differs materially from croupous and catarrhal pneumonia.

Consecutive desquamative pneumonia (alike desquamative nephritis), occurs *bi-laterally*, is *diffuse*, consequently *lobar* and *affects the bronchi secondarily only*. The lungs are enlarged, gorged with blood, minute extravasations exist in the centre of the parenchyma, as well as sub-pleural; do not collapse when removed, notwithstanding they still contain air. Foamy serum flows from the cut surface and very minute excrescences are seen. The tissue is soft and readily torn. The microscope here becomes indispensable and reveals epithelium of the lung alveoli in great quantity; they are bloated and rounded off, filled with fine granules. This is proof positive of the changed cells rais-

ing themselves from their stratum and from each other; in other words, desquamating, analogous to parenchymatous nephritis. Hence the name.

Catarrhal and croupous pneumonia are characterized by changes in secretions, while here *serous infiltration* of the parenchyma is the cause of the *desquamation of the epithelium*.

Pus corpuscles are not present. Pleurisy is wanting. Where death does not ensue in consequence of the acute infectious disorder and the accompanying desquamative pneumonia has not reached too high a grade, resolution takes place by transitory fatty degeneration of the detached epithelium and regeneration of the same, as hyperemia and swelling disappear. This is analogous to what occurs in the liver and kidneys.

Death, however, may not be caused by the general disease, and disease of the lung may have been of so high a grade as to require time for the ultimate removal of its product. In such cases we are dealing with a chronic fatty degeneration, of which more will be mentioned hereafter.

Buhl insists (see Virchow's Archives XII, 1857,) that another termination of consecutive desquamative pneumonia is in *acute atrophy* of the lung, formally disposed of as a result of hypostatic or catarrhal pneumonia. It would take us too far away from the subject matter proper to dwell upon this condition further than to say, that he refers to the lung in an atelectatic condition.

The *second* form of this disease is that which is denominated *genuine* desquamative pneumonia. It holds the same relation to the foregoing consecutive form, as does Bright's disease to the kidney affection accompanying general diseases—albuminuria. It is therefore to be regarded as an independent, a primitive inflammation, or, in other words, the localized expression in the lungs of a general disease.

When confined to one lobe, it is usually the *upper* one. Again, it may involve the whole lung, when the upper lobe will prove to be the one most affected. The inflammatory process is almost invariably further developed in the upper portions and its downward course can be readily noted.

The pathological anatomy of such a lung presents the following picture, in cases which have lasted from six to eight weeks: Volume and weight of the diseased lung are augmented, the surface is smooth, of dull lustre. The pleura is oedematous

with sparse ecchymotic spots. The lung does not collapse either by opening the thorax or upon incision its elasticity appears to be entirely wanting. Nevertheless it is quite frangible. On section we readily discover the lobar (diffused) character of the inflammation. There is also a granular surface, as in croupous pneumonia. In croupous pneumonia, however, the granulations are filamentous plugs partly passed out of the alveolar spaces. Here on the contrary, we have the granulations formed by the *thickened interalveolar parenchyma*, rendered firm by the great œdema and bound down by newly-formed connective tissue. The parts are rich in blood, and pigment in granular form is present in quantity corresponding to the duration of the disease. On account of the parenchyma being firmly bound down, only small quantities of gelatinous fluid can be scraped off from the surface; this fluid is fully mixed with cellular elements. The cellular elements serve to distinguish this form from consecutive desquamative pneumonia, in which œdema alone is present.

The exudation of genuine desquamative pneumonia is a plastic exudation.

The microscope reveals detached epithelium in profusion; these are from the alveoli as well as the finer bronchi, which they fill. These epithelial cells are undergoing the process of fatty degeneration; neither pus, nor mucus is present. Let me repeat: The plastic exudation consists of epithelium in profusion, filling alveoli and finer bronchi and undergoing fatty degeneration. This exudation is bound down by newly-formed connective tissue.

Clinically, this is of great importance in connection with the sputa, which contains alveolar epithelium in large quantities, something not occurring in catarrhal or croupous pneumonia.

Another characteristic of the epithelium is the proliferation of nuclei and younger cells, denoting active regeneration and plastic activity from the beginning of the disease. In croupous pneumonia, it will be remembered, regeneration is the closing act.

The four chief characteristics, viz: firmness of parenchyma, pigmentation, proliferation of connective tissue and a profusion of epithelium, serve to stamp genuine desquamative pneumonia as a *parenchymatous inflammation*, far in excess of the consecutive form.

Buhl points out (page 53) that genuine desquamative pneu-

mopia serves to show the connection and analogy between connective tissue corpuscles, lymph-endothelium and alveolar epithelium, since the desquamation of alveolar epithelium cannot be traced to œdema of the alveolar walls alone, but must be regarded as proliferation and degeneration of tissue elements of one species.

Though likely to end in death, complete recovery is possible, at least as often as in Bright's disease. The great majority of cases, however, are subject to frequent recurrence and gradual continuance of the same processes, thus bringing about permanent and irremediable conditions. And this brings us to our chief point, namely: its termination into consumption. The form in which this is accomplished, is that of *chronic fatty degeneration* and the process is simply the continuation of the acute form: proliferation and fatty degeneration of epithelium becoming chronic. The clinical appearances are from thence those of phthisis.

In such cases general anæmia of course supervenes, which accounts for the lung being found *quite pale*. It is of light slate color, owing to absorption of the pigment, and dotted with minute white specks: alveolar spaces filled with fattily degenerated epithelium.

I now wish to draw attention to certain conditions and facts, which to my mind are of the greatest clinical importance. I refer to the pathological anatomy of *incipient phthisis*, as that term is understood, or what is still oftener designated as *catarrh of the apex*. It was my intention to enlarge upon physical signs and their significance at this stage of lung trouble. But let it suffice to say this: If we accept Buhl's observations of the disappearance of the products of croupous and catarrhal pneumonia, we are forced to this conclusion, viz: With the rare exception of cases of *acute miliary tubercle*, (whose presence is manifested by irreducible temperature, etc.,) nearly all cases of catarrh of the apex in persons previously healthy, are cases of *subacute genuine desquamative pneumonia*.

I say "if" advisedly, as in a future paper on phthisis itself, the summing up of other authorities against Buhl is very strong. The bulk of evidence would show that his desquamative pneumonia is not entitled to be classed as a new picture of disease, but the result of combination of the other pathological changes.

Still, as above stated, if the products of catarrhal and croup-

ous pneumonia are always disposed of, we must allow that catarrh of the apex fits into the frame of desquamative pneumonia.

It will be remembered that chronic fatty degeneration is merely a prolonged desquamative process. The same process can scarcely exist in a subacute form. While elimination takes place, there is *regeneration* at the same time, and this fact is one of the chief factors in my hope of the successful treatment of consumption. Again the rales heard in catarrh of the apex are fine crepitant ones, pointing to the alveoli as their seat, and secondly the sputa are chiefly the same as in genuine desquamative pneumonia, large quantities of *cast-off alveolar epithelium* being the principal ingredient.

As before stated, I will, in my final summing up, once more recur to this subject.

ARTICLE XXXVII.

PUERPERAL FEVER.—By S. T. NEWMAN, M. D., of St. Louis.

I will offer some thoughts upon puerperal fever, a theme full of interest to the practitioner of medicine, and one about which there has been, and still is, such a contrariety of opinion as to involve the subject in much confusion.

In what I shall say I will lay no special claim to originality, but will present such thoughts and conclusions, as I have been able to arrive at from a careful examination of the opinions which have been put forth by others, and from my own observations upon the subject; and if anything which I may say will invite a further examination on the part of others, I am sure it will result in profit.

During the present age, the consideration of puerperal fever has largely engaged the attention of some of the most distinguished medical men of this country and of Europe. The fact that it is a disease peculiar to woman, and to her *only* during the most interesting and helpless period of her married life; the fact that it results from a consummation of the marital relation, which relation it threatens suddenly to disrupt; the fact that it

is connected with the propagation of the species, and at the same time imperils the life of both the mother and her innocent offspring. These circumstances are enough to invest it with the profoundest interest.

In connection with this subject, the late Dr. Meggs uses the following language which is full of pathos: "There is something so *touching* in the death of a woman who has just given birth to her child; something so *mournful* in the disappointment of cherished hopes; something so pitiful in the deserted condition of a new-born, helpless creature, forever deprived of those tender cares and caresses, so necessary to its existence, that the hardest heart is sensible to the catastrophe."

"The term 'puerperal fever' was not adopted until 1716, though the records of medicine afford indubitable evidence that puerperal fever has existed from the most remote periods." (Robert Lee.) The history of the disease for the past one hundred years affords evidence of the same unsettled state of opinion of the profession, in regard to the nature, etiology and treatment of the disease, as that which, to a large extent, exists at the present time. Much of the confusion which is attached to the subject has grown out of the fact that there are, doubtless, several varieties of puerperal fever, and the opinions of medical men have, to some extent, received complexion from that variety with which they have been more frequently brought in contact, and unfortunately preconceived opinions often close the mind to the perception of new truths.

The fact that several varieties of the disease have long been recognized, is abundantly shown by the writings of the great Robert Lee, who gave the subject much attention, and who was as familiar with its literature as any man of his time. He informs us that Tenan, of Paris, mentions an epidemic form of puerperal fever which appeared in 1774 and continued until 1775, and that there were two *distinct* varieties, "the one simple and readily yielding to treatment, the other *complicated* and for which there was no remedy." The same writer—M. Tenan—refers also to an earlier epidemic in Paris—1746—"in which there was complete cessation of the lochia, which was not the case in the epidemic of 1774." Gooch also recognized two varieties, "one very mild, but so strikingly resembling puerperal peritonitis, as to be almost always mistaken for it."

Other writers referred "all the local and constitutional mani-

festations of the disease to a *specific fever*, peculiar to the puerperal state, and believed that all anatomical lesions, affecting the womb and its appendages, were but secondary results proceeding from a constitutional cause, in the same way that inflammations of the brain, lungs, etc., may be the accidents of other diseases." Others, again, believe the disease to be inseparably connected with an inflammatory condition of the uterus, or parts contiguous thereto. Dr. Lee was strongly inclined to this opinion, and yet he was compelled to admit that in some cases, "from the outset there was but little pain. The pulse was feeble and quick, so as to place bleeding out of the question. Such cases usually terminating fatally, the resources of nature and art proving unavailing." Now these very conditions, it would seem, would have suggested blood poisoning to the mind of Dr. Lee, and led him to the conclusion that there was not only more than one variety of the disease, but that the several varieties could not all be referred to an inflammatory cause. But yet it would appear that his mind was so influenced by preconceived notions as to be insensible to truths which had long before impressed themselves upon others. For he says, "in the histories of different epidemics which have prevailed among lying-in women since the middle of the seventeenth century, the symptoms and morbid appearances, though imperfectly described, nevertheless, strangely point to the accuracy of the conclusion that the whole phenomena, local and general, of these fevers are to be referred to inflammation of the uterine organs."

The same view was held by Colombat and by the French school. A French writer declares, "nothing can be more absurd, more chimerical, or more contrary to the spirit of analysis and observation than the idea that there is a fever essential to women recently delivered."

But among all those who have contended for the inflammatory origin of puerperal fever, none have done so with more energy and enthusiasm than Dr. Meggs, of our own country and time. He says, "a fever connected with the puerperal state, that proves fatal and leaves no trace of inflammation demonstrable by necroscopic inquiry, ceases on *that account*, in my mind, to have the value of puerperal fever; it is something else. If you fire a bullet through the womb of a puerperal woman, or if you tear it with a pair of forceps, or a sharp crochet, and she dies, she will die of puerperal fever."

He goes so far as to deny its kindredship with other diseases, a fact which is now held by the highest authorities. Dr. Meggs declares with emphasis, "there is not, and cannot be, any identity between erysipelas and puerperal fever for the reason that the former is a disease attacking primarily the dermal tissue, while the latter affects the serous membranes." But as the contagious character of puerperal fever has always been a stumbling block in the way of those who regard it to be of an inflammatory disease, Dr. Meggs affirms that it is not contagious, and that the reasons which have led others to so regard it, can be explained upon what he calls epidemic causation, which causation is beyond the scope of the human understanding, but which does not necessitate the agency of the fermentative, sporiferous or ovular element for its propagation. We cannot admit the force of Dr. Meggs' argument against contagion, which is, that as he and many others have attended upon puerperal fever in its most malignant form, and have gone from the dissection of putrid bodies to women in labor, without communicating the disease, that therefore it would be more philosophical to conclude that those unfortunate accoucheurs, whose foot-prints have been unmistakably marked, have been pursued by some strange fatality or have fallen upon a chapter of accidents, rather than to conclude that they have carried about their persons for an indefinite period, some peculiar contagion which does not attach itself to others equally exposed to its influence.

Now, if as stated by Dr. Meggs and others—and which I believe to be true—that some physicians are made strangely to imperil their patients by having been brought in contact with puerperal fever, while others are involved in no such misfortune, we ought to search diligently for a solution of the question. It has been suggested that as even the advocates of non-contagion recognize the propriety of using every precaution against the possibility of conveying the disease, it may be owing to the precautions used. But as this argument would also apply to the unfortunate class referred to, it is unsatisfactory.

An explanation has suggested itself to my mind which, while I do not commit myself to its correctness, is, nevertheless, I think, quite as rational as that furnished by Dr. Meggs. It is this. May not a causation of disease, whether it be zymotic, cryptogamic, or ovular, or something else, which is so minute as to escape the observation of the microscope, and so subtle as to

give no response to the most delicate chemical tests, be *also neutralized* by some agent or some *peculiar condition of circumstances* which may be brought in contact with it, which equally eludes all known means of investigation.

It has been suggested by some whose opinions are worthy of respect, that the peculiar poison which gives rise to the spread of puerperal fever, is "by some faulty process generated in the system of some persons who have been brought in contact with certain influences, and by them 'transmitted' to others." To my mind it seems more in harmony with certain known facts to conclude that those persons to whom Meggs refers, who do not impart the disease by contact, have by some unknown influence had their bodies, their *blood* so *impressed* as to be insusceptible to this peculiar poison. Before the time of Jenner who was capable of explaining why certain persons were exempt from the contagion of small-pox? And who can explain to-day, why a child born of a syphilitic father, but of a healthy mother, will communicate disease to a wet nurse, while the mother, who also nurses it, will escape contamination.

But Dr. Meggs insists that if puerperal fever is contagious, it is unlike other contagious diseases, which are influenced by epidemic causes. "In small-pox, at least, we can always visibly and palpably demonstrate, if not the essence, the contagious virus." Now is this always true? Are we prepared to assert that even small-pox may not arise spontaneously, under a peculiar combination of influences? How did it first arise? And especially in regard to measles, scarlet fever, etc., is not epidemic influence sometimes so strong as to give spontaneous origin to these diseases, and which are afterward propagated by contagion? But contrary to the statement of Dr. Meggs, it can be shown that puerperal fever behaves in a manner very similar to other contagious diseases to which he refers, and which are modified by epidemic influences. For instance, like small-pox, scarlet fever, etc., it prevails mostly in winter, and though confined to the puerperal state, it is conveyed from one puerperal woman to another, and it is, like these diseases, circumscribed within certain limits. Whether the analogy can be said to extend any further or not, I am unable to say.

As far as I am aware, no series of observations have been made with a view of ascertaining whether one attack of puerperal fever so impresses the blood, as to furnish immunity

against a second, and indeed, as there are several varieties of the disease, great care would be required, and the experiments should be confined only to the contagious variety.

The opinion as to the contagious character of puerperal fever is by no means new, and was held by Clark, Gordon and others, and even Robt. Lee himself gave it a feeble assent, but did not permit this view to contravene his opinions as to its inflammatory character, for he adds: "Its contagious or non-contagious features cannot affect the view of its proximate cause or essential nature, for the symptoms, morbid appearances, and result of treatment, *all* incontrovertibly prove that whatever may be its nature and remote cause, it acts by exciting inflammation in the uterine organs." This statement is scarcely in harmony with one elsewhere made, where he says: "There were some varieties which from the beginning were accompanied by great prostration, the pulse rapid and feeble, etc." These were undoubtedly cases of genuine puerperal fever from empoisonment of the blood.

The fact that in most of the cases where death has been caused by this disease, anatomical investigation has discovered evidences of inflammation in the uterine organs, has, without doubt, lead many into error. They overlook some facts connected with a woman about to enter into the puerperal state, which are of great significance. "Her organs and functions have for months been in a state of high excitation. Her womb has grown enormously, and infringes upon the organs of the abdomen and chest. It has been receiving large quantities of blood which, after the birth of the child, must be diverted into other channels, and at the same time immense pressure is removed from surrounding organs, while the womb is left in a traumatic condition, (which is compared to the stump of an amputated limb) and has to be made new by involution." These conditions are such as might be supposed to render these organs liable to become diseased from any constitutional impairment, and if a woman thus conditioned, should die of acute phthisis, or pneumonia, or typhus, it would not be expected otherwise, than that these weakened and susceptible organs should give evidence of inflammation, either hypostatic or otherwise. But it would be irrational and unphilosophical to conclude that these lesions were primary, even though they may have been the immediate cause of death.

That there is a metritis or peritonitis connected with the puerperal state, which is sometimes epidemic and very fatal, cannot be doubted, and it may also be true that this disease may be so affected by the absorption of putrescent material and other influences with which we may not be acquainted, as to become a focus of contagion. This view is rendered probable by an account furnished by M. Pen, of an epidemic which prevailed in Paris in 1664, during which, he tells us, a prodigious number of women died in Hotel Dieu, and M. Veson assigned as a cause of this mortality, the fact that the lying-in wards were immediately over those set apart for wounded soldiers, clearly intimating that the disease was intensified by this cause. And though it is not so stated, we are justified in concluding that erysipelas had much to do with its spread and mortality. In No. lxxiii of *Braithwaite's Retrospect* for 1877, Dr. Priestly furnishes a synopsis of a debate upon this subject by the Fellows of the London Obstetrical Society, in which the relation of puerperal fever with erysipelas and some other diseases was carefully discussed, and the conclusion arrived at was that the connection between erysipelas and puerperal fever, is established beyond dispute. Indeed, Virchow makes puerperal fever synonymous with malignant erysipelas. Dr. Fordyce Barker denies their identity, but says they are interchangeable. This view Dr. Priestly regards as adverse to the "theory that identity of cause will *necessarily* produce identity of result." While it is true as an abstract fact, that identity of cause must produce identity of effect, yet causes *apparently identical* may widely differ, but in a manner not recognizable to our senses, and hence results may follow which seem to differ from our idea of causation. This we see constantly verified in regard to malarial poison, giving rise at one time to intermittent and pernicious fever, and at another time to rheumatism, dysentery or neuralgia.

Some years ago, Dr. Rob't. Ferguson, then professor of midwifery in King's College, "attributed puerperal fever to a vitiated state of the fluids of the body"—blood poisoning—"and regarded all varieties of local lesions as consecutive to a vitiated circulation." Dr. West thinks that at the present time we have advanced but little beyond the conclusions of Dr. Ferguson; but in this he is manifestly in error, for others have ventured yet further in the same direction and have sought with encouraging results to ascertain the origin of the poison which thus contaminates

the blood, and also the manner of its propagation. Dr. Barnes holds that whatever may be its nature or chemical composition, it has two sources of origin: One arising from septic matter generated in the system of the patient as the result of decomposition of tissue, and which he calls autogenetic. An example of this kind is furnished by Matthew Duncan, in the January No. of *The American Journal*. The Doctor was called in consultation to see a woman, who upon the third or fourth day after the delivery was attacked with puerperal fever, and whose system was greatly depressed from the effects of septic absorption—great depression of the vital functions, I regard as a prominent symptom in all cases of diseases arising from septicæmic causation, and is in striking contrast with that form of puerperal fever, depending upon the inflammation of the uterine organs. The doctor suspected the cause and made an examination with a view of ascertainment if any putrescent material was to be found. Discovering none within the vagina, he introduced at first one finger into the os uteri, then another, until the entire hand passed in, when he discovered a fragment of chorionic membrane still attached, which he dislodged and removed, and which was extremely offensive; after which the woman recovered.

It must strike every one as most remarkable, that the entire hand could be introduced readily within the uterus five or six days after the delivery, and suggests a very relaxed condition of the organ. The other source from which the poison arises, according to Barnes, is from without, and which he calls heterogenetic. The disease arising from heterogenetic causation is regarded as more serious and more likely to spread by contagion. Though as already intimated, I believe that, that from autogenetic origin, may become contagious when connected with certain conditions favorable to the spread of erysipelas, and perhaps other diseases also. Many believe that a puerperal woman exposed to the poison of scarlet fever will contract puerperal fever. Whether this refers to those who are susceptible to scarlet fever or not, I don't know; but it is well known that very many puerperal women have been exposed to scarlet fever, even in its malignant form, without having puerperal fever.

The subject of heterogenetic or outside poison of Barnes, is one of very great importance, and opens a wide field for speculation; Dr. Priestly regards it "as a problem which is most difficult to solve, and upon a correct solution of which, probably

depends the reconciliation of many conflicting views" and the discovery of a means by which the poison may be counteracted. "I cannot," continues Dr. Priestly, "help thinking, that the accoucheur will in time succeed in preventing the spread of this disease among puerperal women, at least the heterogenetic form."

The treatment must be considered under three heads, viz: Prophylactic, curative, and palliative. As to prophylactic treatment, I believe all are pretty well agreed. During labor great care should be exercised to protect the genital organs from injury. If the pains are accompanied by unnecessary suffering, chloroform, chloral or opium should be used; if the pains are inefficient, ergot should be used freely; if the os uteri is dilatable, delivery should be effected by forceps. Under proper *circumstances* we need not be apprehensive about the use of ergot, though Dr. Playfair in his last work on obstetrics, greatly depreciates its use, and magnifies its dangers. His objections to it are evidently from theory, and not the result of experience.

For many years I have been in the habit of using ergot with very great satisfaction in obstetric practice, employing it, indeed, in almost every case, sometimes to facilitate labor, and sometimes to anticipate post partem hemorrhage, and to close the uterine vessels against the absorption of putrid matter. And I have never yet had an accident attributable to it, unless it may be an occasional rupture of the perineum. After labor the woman should be kept free from excitement. If the perineum has been ruptured it should at once be sewed up, the knees confined together and the woman placed on her side with a view to prevent, as far as possible, unhealthy fluids from passing over the torn surfaces. After which an anodyne should be administered to quiet nervous disturbance and secure sleep. The vagina should be kept clean by disinfectant injections.

In no case should a puerperal woman be brought in contact with any contagious disease, or other unhealthy surroundings. Nor should she be attended by an accoucheur who has recently been in attendance upon puerperal fever, or erysipelas, or who has been engaged in the dissection of dead bodies. Other precautionary means will suggest themselves to the thoughtful practitioner.

Curative treatment must depend upon the nature of the disease. If it be connected with an inflammatory condition of the uterine organs of a sthenic character, the patient should be

freely bled as early as possible, and the inflammation should be further counteracted by the use of *veratrum viride*, *digitalis* or *aconite*, and the free use of opium, together with warm fermentations over the abdomen.

If the disease be from septicæmia, the treatment above indicated will be worse than useless. Here we must direct our efforts towards sustaining our patients by stimulants and proper diet, while at the same time we must employ such remedies as will assist in eliminating or neutralizing the poison. As sulphurous acid is known to be destructive to all the lower forms of animal life and vegetable sporules, some of the sulphites might very properly be employed. Carbolic or salicylic acid might also be tried. But for these purposes I regard no remedy with which we are acquainted, superior to quinine in large doses. I am well satisfied of its very great usefulness in septicæmia and pyæmia, and perhaps in all zymotic diseases.

Means must also be used to quiet neurosthenia and to secure sleep. For these purposes nothing is better than bromide potass and chloral; chloral, too, may act favorably not only in procuring sleep, but it may, also, exert some influence in neutralizing certain poisons in the blood, as it is known to possess, in a considerable degree, antiseptic properties.

Palliative treatment will look to securing as great a degree of comfort for our patients as possible.

In speaking of treatment I have confined myself to general principles, leaving the intelligent physician to supply details as his judgment may indicate.

ARTICLE XXXVIII.

THE PROVINCE OF LITHOTRIXY. By W. HUTSON FORD, M. D., of St. Louis.

"Advenienti occurrere hosti."

In order to estimate the comparative advantages of lithotomy and lithotrixy in the classes of cases to which each operation is properly adapted, I subjoin two standard tables.

Coulson's table of the result of lithotomy for different ages, published in 1857, and based upon 2,972 cases, is as follows:

Age--Years.	No. Cases.	No. Deaths.	Rates of Mortality.	Per Cent.
1--10	1466	112	1 in 13.08	7.65
11--20	731	71	1 in 10.28	9.72
21--30	205	31	1 in 6.61	15.00
31--40	141	24	1 in 5.83	17.00
41--50	123	27	1 in 4.50	22.22
51--60	161	44	1 in 3.65	27.50
61--70	126	39	1 in 3.23	31.00
71--80	19	7	1 in 2.71	37.00

Thompson's table, made out from 1,827 cases, the details of each one of which were reported to him in writing, is given below:

During the Years.	Cases.	Deaths.	Mortality Per Cent
1--5 inclusive	473	33	7
6--11 "	377	16	4
12--16 "	178	19	11
17--20 "	76	11	14
21--29 "	86	11	13
30--38 "	75	7	9
39--48 "	100	17	17
49--58 "	191	40	21
59--70 "	233	63	27
71--81 "	38	12	32

The general mortality of lithotomy for all ages, from Coulson's table, which was made up of returns furnished by Castara, Smith of Bristol, Crosse, Cheselden, Dupuytren, and South, is 11.94 per cent.; by Thompson's, it is 12.53 per cent. I prefer Thompson's figures, because in Europe the more promising cases have been, for many years, submitted to lithotrixy, and lithotomy for that reason, in spite of advances in the operation itself, has become more and more fatal within the last twenty years, and will continue to do so.

Various tables have been made out, comprising thousands of

cases, in which the mortality *for all ages*, says Van Buren, gives a mean of from 1 in $6\frac{1}{2}$ cases, to 1 in 11; these are no doubt largely made up of older data.

Andrews and Lacey give a table of 5,728 cases, collected from American, English, French, Russian, Italian, and East Indian operators, with a mortality of 12 per cent for all ages.

Various operators, (say these authors in a brochure published in 1877), in the upper lake States, contribute conjointly 48 cases, with 11 deaths, (for all ages) just double the ordinary mortality; of 21 adults, 8 died, and 3 children out of 26. Coulson gives the following table of American operations up to 1857:

Dudley.....	207 Cases	6 Deaths	1 in 34.50
Mott.....	162 Cases	7 Deaths	1 in 23.28
Mettaner.....	91 Cases	4 Deaths	1 in 22.75
Gibson.....	50 Cases	6 Deaths	1 in 8.33
N. R. Smith.....	45 Cases	3 Deaths	1 in 15.00
S. D. Gross.....	40 Cases	3 Deaths	1 in 13.33
Total.....	595	29	1 in 20.50

very nearly five per cent. These operators, however, did not have their best cases weeded out by lithotripsy, as happens now in Europe, and the Eastern States, more particularly, of the Union; indeed they operated when lithotripsy was injudiciously pushed forward by over sanguine friends, until, by improper employment, it became more fatal, actually, than lithotomy had been.

Later figures credit Gross with 140 cases and 12 deaths; Dudley's series rose to 227 cases with 7 deaths. According to Eve, Dudley rejected 18 cases or about seven per cent of the whole; he operated by the bilateral method, as Eve himself mostly did. Pope operated altogether 99 times.

I present a table, by Crosse, from Coulson's work, based upon the Norwich statistics, showing the rate of mortality of *lithotomy* as influenced by the size of the stone:

Weight of Stone.	No. Cases.	Deaths.	Mortality.	Per Cent.
1 oz., and under	529	47	1 in 11.25	8.88
1 to 2 ounces.	119	18	1 in 6.61	15.11
2 to 3 "	35	16	1 in 2.18	45.87
3 to 4 "	11	7	1 in 1.57	63.65
4 to 5 "	5	3	1 in 1.66	60.00
5 to 6 "	2	0	0 to 2	00.00
6 to 7 "	2	2	2 to 2	100.00

It is well known, that in lithotomy, as Coulson observes, the most favorable results are not associated with the smallest stones.

With stones under two drachms in weight, the mortality is greater than with those that are between two and three drachms, and particularly with those that are from four to five drachms in weight; the chances of recovery with this weight of stone being actually two and a half times greater than with a stone that weighs less than one drachm.

The mortality of lithotomy for all ages over twenty years, is : by Conlson's table, 22 per cent.; by Thompson's table, 20.74 per cent.

Conlson's average for all ages between 30 and 70 years is 24 per cent.; Thompson's for the same period is 21.20 per cent. It will therefore be safe to assume the average risk to life by *lithotomy* after thirty years, as about 22 per cent.

Between puberty (assumed at 16 years) *and thirty years*, or full manhood, the mortality by Thompson's table is 13.5 per cent.

Below the age of puberty, the mortality falls to about one-half of this. In four hundred cases tabulated by Thompson, under five years of age, the mortality was one in $13\frac{1}{2}$ cases, about 7.5 per cent. Operations upon children after Key's method by lateral incision and the straight staff at Guy's Hospital, says Bryant, gave a mortality of one in $23\frac{1}{2}$ cases; (about $4\frac{1}{4}$ per cent.), and "during the last fourteen years (1858-1872) seventy (70) cases have been cut consecutively without a death."

Of Thompson's 1,827 cases, one-third occurred during the first seven years of life, and one-half before the end of the thirteenth year. Thompson states that the average mortality under thirteen years from all operators, was one in 16 cases, about 6 $\frac{1}{2}$ per cent. Pope, (of St. Louis,) lost one child in 16, about the average. His success with adults, also one in 16 cases, was very extraordinary in his earlier career, but declined afterwards to about the average. Eve's figures for children, falls just *below* Thompson's average, being one in 14.5 cases. Eve cut 51 adults with 8 deaths, something less than 16 per cent., which was a little below the average.

It is evident that lithotomy, in children, is one of the most successful of the great operations of surgery, notwithstanding the far greater gravity of the necessary lesions, considering the small size of the parts, with them, than in adults. Any operation in which we may have a run of seventy consecutive cases without a death is nearly as perfect as could be desired, if it be free from risk of untoward sequelæ. No method of dealing with the

stone, below the age of puberty, can therefore at present come into any kind of competition with lithotomy.

In view of considerations like these, the mortality being of course an expression in part of all the local and general peculiarities of childhood, lithotripsy is now absolutely renounced by nearly all surgeons in favor of lithotomy for subjects under 15 or 16 years of age. Nor should it be employed except in cases where the stone is very small and capable of being completely pulverized at one sitting, the patient being not less than ten or twelve years of age and with a well developed urethra.

After puberty, however, in consequence of the complete development of the urethra, the decline of vesical irritability, the amplification of the bladder, and the diminished capacity of the economy for local reaction against wounds, the indications are just the reverse, for stones of a certain size in uncomplicated cases.

With a death rate of 13.5 per cent. for early manhood, and 21 or 22 per cent. for middle life, lithotomy becomes a very serious operation, ranking with the larger amputations. Fortunately, where lithotomy begins to be a matter of grave concern, even for stones of moderate size, the results of lithotripsy practiced under proper restrictions, have been found year by year more and more satisfactory, though the operation is by no means devoid of its own peculiar difficulties and risks. It is only during the last twenty years that lithotripsy has begun to lay claim authoritatively to its special province. As late as 1853 Sir William Fergusson writes as follows: "Notwithstanding the reputed success of Civiale, it seems to me we have not sufficiently authentic data by which to determine the comparative safety of lithotripsy to that of lithotomy; but regarding its applicability and even superiority in many instances, there can be no doubt. In my own practice I now find that I perform lithotripsy both more frequently and successfully than in former years, but generally the cases occur in private practice. Perhaps the reason of this is, that among those who do not seek hospital-aid, it is more generally known, that if the surgeon is applied to at an early date there is better chance of the case proving suitable for this proceeding." In 1867, Fergusson says, "It may reasonably be doubted if better can be done before fifteen than cutting for stone."

Bryant's opinion is, that as a rule, in patients under puberty lithotomy ought to be selected. In France lithotripsy is more com-

mon than in England. "In adults," Bryant goes on to say, "it may be safely asserted, that whenever a stone is found in the bladder of a male adult, its removal by lithotrity ought primarily to be entertained, lithotomy being had recourse to, only when lithotrity is inapplicable." "It may be stated," says Erichsen, "that at the middle and advanced periods of life, lithotrity is most successful; while in early age, lithotomy is the preferable operation. Lithotomy is so successful an operation in children that the surgeon would gain nothing by substituting lithotrity for it." Nor are the statistics of lithotrity with children nearly so good as those of lithotomy. "In 35 boys operated upon by Guersant by lithotrity, 7 died, and three at least of the others had to be operated upon by lithotomy." "At very advanced periods of life, the conditions are often such as to prevent the performance of lithotrity." Nevertheless, Segalas states that of 14 octogenarians whom he lithotritized, he did not lose one, and of 27 septuagenarians, but two. "Lithotomy we have seen is very fatal at this time of life, the tables showing a mortality of 32 to 37 per cent. Most probably the stones in Segalas' cases were of moderate size. "It is well as a rule," says Erichsen, "not to attempt to crush a stone above an inch and a half in diameter unless it be very soft."

Holmes, in 1876, says, "Lithotomy is very successful in male children, and should be practiced almost exclusively up to the age of fifteen. Lithotrity is not to be recommended in cases of tight stricture," says he; nevertheless Thompson operates on these cases just as on others—first dilating the stricture by the continuous method, and thenceforth keeping it dilated in the same way, throughout the treatment. "Lithotrity has no chance of success in extensive renal disease," says Holmes; but such patients usually die after lithotomy likewise.

In case of very large or numerous calculi, lithotomy is best, as the stone may be too large to break, or the bladder too full to allow of the necessary manipulations of the lithotrite." In the female, lithotomy is preferable, to which opinion Sims gives an emphatic sanction.

Thompson's vast experience and exhaustive study of the subject render his expressions of paramount importance. As in lithotomy, the danger to life in lithotrity varies directly as the size of the stone. The mortality by lithotrity *ought* to be *nil*, says Thompson when the stone is of the size of an ordinary nut,

or smaller. He states in an address before a medical society at Birmingham, in 1873, that in a special series of 63 cases where the mean age was over 60 years, he had no death, the stones being of the size just indicated, and that in other cases, he had *never had a death* where the stone was of that size or smaller. By *lithotomy*, the mortality at 60 years or a little over, would not have been lower than *27 per cent.* according to Thompson's and Coulson's tables. Success, Thompson observes, should always attend the operation under such circumstances, two sittings generally sufficing to remove the calculi completely, or three at most.

When the stone is larger, and from five to ten sittings become requisite, the danger is greater. If the stone be as large as an unshelled almond, although lithotrity is still far superior to lithotomy, and gives excellent results, a certain number of patients succumb, something less than eight per cent. This is about the mortality of the period of *adolescence*, by lithotomy, and one or two per cent. less than the general mortality of lithotomy *for all ages*, while as we have seen, the corresponding death-rate by lithotomy *for all cases over puberty*, is 22 per cent., or two and a half times as great.

When the stone is larger than an almond, the mortality rises to ten or twelve per cent., and we begin to find cases, which, on account of the size of the stone or impaired health, had better be cut. But in the very great majority of cases, lithotrity is still undoubtedly the best procedure.

In stones from an inch to an inch and a quarter in their smallest diameter, either lithotomy or lithotrity may be practiced, and it is proper in such cases to incline strongly towards the cutting operation, if the complicating conditions are in the least degree embarrassing. If there is much cystitis of long standing and the stone is phosphatic or nearly so, the patient being over 40 years of age, the case had better be cut; so also when there is any evidence at all, of renal disease. On the other hand, even when great irritability of the bladder exists, and bloody urine is occasionally passed, if the great organs are healthy, lithotrity may be safely ventured upon.

In former times a great deal used to be said about the difficulty of getting rid of the last fragment, in lithotrity, and it was affirmed that after lithotomy, recurrence of the stone from this cause, took place only once about in sixty cases, whereas

the recurrences after lithotrity were as high as one in ten. In 1860, Civiale states that of 36 patients he operated upon, *ten* had been previously operated upon by lithotrity. For this reason, Erichsen observes, lithotrity can not be looked upon as so complete a cure, in all cases, as lithotomy. Independently of the fact, that in many cases, recurrence is by no means due to the retention of a fragment, but to a new descent of renal calculi, or is not really due to calculus, but to incrustation of the walls of the bladder, if proper precautions be observed pertaining to the operation, and the patient be duly held under observation for a certain length of time, every vestige of stone can be readily removed from the bladder. Even in lithotomy, it is by no means unusual for the stone to be partially broken during extraction, and this is quite often unavoidable from its size and friability, so that some small particles are apt to remain behind between the folds of mucous membrane, tightly held by the contracted bladder. So very small a fragment of stone, can now be detected by the use of the delicate sounds introduced by Thompson and Mercier, and the bladder so readily freed from small pieces *while full* of water or urine, by Clover's suction apparatus, that no practical difficulty of this kind can be said to exist. The case was quite different, in times past, when clumsy bars of steel with a catheter-like curve, were used in sounding for stone. With this it was difficult to find even a good sized stone sometimes, much more a small fragment. On this point, Thompson observes, "it has been objected to lithotrity—and there was perhaps some truth in the allegation formerly, but not now, if the operation is done well—that you never make sure of getting rid of the last fragment, that you might leave a portion to become the nucleus of a future stone. But there is little more difficulty in getting rid of the last fragment than any other, provided you go the right way to work. Generally, in four cases out of five, the last fragment passes like the others, by the patients' natural efforts. But suppose you have reason to believe that a bit remains too big to pass—you then take a lithotrite with short rounded blades, with which you may explore in the reverse portion. It is quite easy to procure an audible note from a fragment no bigger than a split pea, by this means, which when found may either be crushed or withdrawn entire." "There is another very good way of getting rid of the last fragment, or of fragments at any time; I mean the appa-

ratus of Mr. Clover, though the process is rather more trying to the bladder than an ordinary sitting for lithotrity." Getting rid of the last fragment, after lithotrity, is therefore a part of the after-treatment, and simply necessitates acute observation, and a continuance of the surgeon's care devoted to this especial object.

Lithotrity does not seem to have found much favor at the hands of Western surgeons, a remarkable fact, in view of the high reputation which the West has long enjoyed for the boldness and sagacity of its operators. Twenty years ago, however, lithotrity was still in its infancy in England, Germany, Russia, and the United States. Morland, writing in 1858, says, "lithotrity has been comparatively¹ very infrequently performed in the United States, while lithotomy is done constantly." Depeyre, of New York, first performed lithotrity in the United States in 1831. Gibson, Pancoast, Warren and N. R. Smith especially cultivated this mode of dealing with the stone; all, however, seemingly impressed with the idea, that the new operation was more or less a *rival* of lithotomy, instead of being, as we now perceive, one only of the two great complemental operations at our disposal for the removal of calculi. Many surgeons, writes Gross, have occasionally had recourse to it, but comparatively few have made it a subject of special study or practice. Lithotrity, he says, has not received fair play at the hands of the American lithotomists. Dudley, he believed, had never performed the operation,—nor is there any statement in Gross' works to lead to the supposition, that he had ever himself successfully practiced it. There is no case in Eve's book, of lithotrity done by himself; most probably he never did it up to 1857. Andrews and Lacey in their late brochure, p. 104, note that lithotrity, even up to 1877, has been inexcusably neglected by operators in the "Upper Lake States," for they can find the record of *only one case* which was successful.

The operators of a past generation evidently distrusted the capacities of the operation, and justly, perhaps, for in the time of Mott, Dudley, Pope and Eve, a decided reaction had set in against lithotrity. It was to this that Sir William Fergusson alluded in 1867, when saying, "in the whole of my professional experience I know not of a useful operation which has been so shamefully overpraised, and thereby damaged in character, as lithotrity. I know not of any process in surgery requiring more forethought, knowledge, manipulative skill, and after-judgment."

Altogether, too much had been claimed for the operation, whose proper scope was not yet at all comprehended, many supposing it to be a happy escape from the knife, applicable to every case. Hence we read of all sorts of disappointments and failures; ill luck that was quite natural when men attempted to crush stones two inches and more in diameter. Besides this, urethral surgery had not attained the vigorous development of the present day, while the special training necessary for handling the lithotrite, fears of wounding the bladder and urethra, of not being able to seize or to crush should the stone be really caught in the jaws of the lithotrite, of dislocation and fracture of the male blade, of incarceration of the lithotrite, and especially of the two chief dangers of the operation, viz.: traumatic cystitis and pyelo-nephritis by extension, and impaction of fragments in the urethra, conspired to deter men who were justly celebrated for enterprise, from invading an unknown and apparently treacherous territory. The lengthy list of difficulties and dangers of lithotrity, much exaggerated, because unknown and unstudied,—to the eye of a past generation assumed the proportions of a formidable battalion, not to be engaged without much previous skirmishing, especially when by the sure process of feeling with the fingertip, and of cutting with a sure hand, the stone within a minute or two could be withdrawn from its hiding place, and held up triumphantly, unbroken, to the gaze of grateful patients and dazzled bystanders.

Lithotrity takes rank, at the present time, after close scrutiny and much restriction, as the method, *par excellence*, of dealing in adults, with stones of moderate size and hardness where *special contra indications* now better and better understood every day, are not present. The operation itself, both as regards its conduct and the construction of the lithotrite, is undoubtedly susceptible of improvement, and it may yet become possible to remove such stones as lithotrity is competent to deal with, at two sittings or even at one. Better study, and greater care also, may be able to obviate some of the most troublesome after-complications of lithotrity, such as retention of fragments, incontinence of urine, chronic cystitis and phosphatic deposit.

On the other hand, although lithotrity has been so exhaustively studied, so varied and scrutinized in every particular and mode, it is still perhaps possible to improve the preparatory and subsequent treatment; much advance may be looked for, from

the current recognition of the importance of antiseptic measures and precautions. The progress of operative surgery may, by these means, enable us to realize, *in adults*, something approaching to the success, which in exceptional instances, has been met with in children; but it is *not to be anticipated* that the extensive incisions and traumatic injury to the bladder and prostate characteristic of lithotomy, can be ever wholly divested of their elements of danger.

In a late account of a discussion in London, upon a paper read by Sir Henry Thompson, giving the results of 500 operations for stone in the bladder, I find the positions assumed by various eminent speakers to have been very closely similar to those I have endeavored to illustrate as current among leading authorities within the last few years. Thompson's figures, which comprise all his operations, show 422 cases of lithotripsy with a mortality of from 32 to 35, or about 8 per cent. Ferguson's, Thompson's, Liston's, Keith's, and Cadge's cases conjointly numbered 892 cases, with a mortality of 74, also about 8 per cent. This list, of course includes many cases which would not now be subjected to lithotripsy. Mr. Cadge had found the average age of cases operated upon by Crosse, before the introduction of lithotripsy, to have been 60 years, and the mortality, 41 per cent. Thompson had operated altogether 78 times by *lithotripsy*, with 29 deaths or 37 per cent. Notwithstanding the admitted tendency to recurrence after lithotripsy, Mr. Cadge observed that every year's experience proved that lithotripsy, when judiciously applied, is capable of saving many lives, and is an enormous boon to suffering humanity. Cadge himself had operated by lithotomy 133 times and 86 times by lithotripsy.

Sir Joseph Fayrer alluded to the practice of Baboo Ram Narain Dass, a native Indian surgeon, who had cut 248 cases with 17 deaths, figures not as extraordinary as Dudley's.

Mr. Paget regarded the present time as a favorable one for a reconsideration of the comparative advantages of lithotomy and lithotripsy. He believed that if a fresh start was taken in lithotomy, the mortality would be nearly as low after it as after lithotripsy.

Mr. Napier called attention to the importance of detecting the existence of stone in the bladder soon after its descent from the kidney.

Sir Henry Thompson thought that lithotomy and lithotripsy

were often contrasted from a wrong point of view; they were not at all antagonistic but complementary operations. He thought all surgeons agreed that a lithotrity which could remove the stone at two sittings was the best operation, and many calculi came into the category. In reply to Mr. Napier, he said that stone in the bladder could be detected at an early stage by any intelligent medical man. "We do not see," said he, "as many cases of diseased bladder after lithotomy as after lithotrity, because cases where the bladder was much diseased usually died after lithotomy." In the position he was taking there was nothing like a *reversion* to lithotomy, but he would perhaps now practice lithotomy in cases which he would have formerly subjected to lithotrity. The accidents attending lithotrity were generally due to attempting to crush too large a stone.

1611 WASHINGTON AVENUE.

[CONTINUED IN NEXT NUMBER.]

ARTICLE XXXIX.

CASE OF RUPTURE OF THE JEJUNUM.* By F. J. LUTZ, M. D., of St. Louis.

On Thursday afternoon my friend, Dr. Wesseler, was called to see J. S., æt. 19, a laborer in a brewery near his office, who had met with an accident. He learned that the man had been engaged in loading a small spring wagon with coal. To get the coal conveniently he stood with one foot on the wagon-box and with the other upon a platform. Whilst in this position the horse suddenly started off, and the man, who held a large piece of coal in his hands, fell to the ground, a height of about six feet, and was struck in the abdomen by the coal. He had been drinking considerable quantities of beer during the day. On examination no external wound was found; but the quick, feeble pulse, the pinched, pale countenance and the great pain, referred

*Read before the St. Louis Medical Society.

to the umbilical region by the patient, indicated grave internal injuries.

Leeches and anodynes were prescribed and the patient having no home of his own, was transferred to the Alexian Brothers' Hospital. Even before his arrival there, he expressed a desire to micturate, and the urine was drawn off; during the night he was catheterized several times.

The patient remained conscious until about two hours before death.

At our usual morning visit we found the patient moribund. Pressure on the abdomen produced a splashing sound, indicating the presence of fluid in the peritoneal cavity. He died at 11 o'clock A.M., about eighteen hours after admission.

Post mortem six hours after death.—Subject firm; muscles well developed; rigor mortis well marked. Neck, face, back, the inner and posterior aspects of the thighs discolored by suffillation. Abdomen distended and tympanitic; but presents no lesions. On opening the peritoneal cavity a large quantity of gas escaped; the cavity was almost filled with blood mixed with the contents of the alimentary tract.

The peculiar itching sensation of the hands, experienced when removing this fluid, might well be ascribed to the circumstance that the contents of the digestive tube consisted, in this case, almost entirely of beer. Blood vessels of the omentum very much congested; omentum adherent to the intestines by coagulated blood. Small intestines, as also the colon, congested. About four feet from the stomach a gaping wound was found in the jejunum; two-thirds of the circumference of the bowel was severed. The mesentery immediately behind it, shows an aperture two inches in length. In the neighborhood of the rent the intestine was blackened by ecchymosis. No discernible lesion of any of the larger arteries. The other viscera of the abdomen presented no lesion, but were all more or less congested. The bladder was completely emptied and firmly contracted.

REMARKS.—The most plausible explanation for the rupture of the bowel and mesentery seems to be, that they were caught between the weight and the spinal column. Owing to its fixed position, the jejunum is more frequently torn than any other portion of the intestinal canal, especially by crushing weights. Jobert regards sudden and excessive meteorism produced by the

escape of intestinal flatus into the peritoneal cavity, as the most characteristic sign of rupture of the intestines; yet Otis (Med. and Surg. History of the War of the Rebellion, Surg. Vol., part second, p. 22) considers it "a sign by no means uniformly present in intestinal rupture."

Owing to the ambiguity of the symptoms to be considered, the diagnosis has been doubtful, and from the cases reported the prognosis is not less so. Nevertheless the treatment hitherto has been comparatively plain. Absolute rest, warmth to the surface, leeches over the seat of pain, evacuation of the bladder, and the administration of opium, are the expectant measures resorted to. But it is safe to predict, that ere long a more heroic plan will be substituted for the expectant one. An exploratory incision is no longer incompatible with received surgical rules.

ARTICLE XL.

ATROPIA IN COLLAPSE. By J. T. HODGEN, M. D., St. Louis.

I find in the *Philadelphia Medical Times*, Feb. 2, 1878, an article entitled "Belladonna as a Remedy for Collapse," by Reinhard Weber, M. D., in which Dr. Weber recommends belladonna as a more efficient remedy for collapse than alcohol, musk, camphor, or other articles usually used in such cases. Dr. W. also claims to have been the first to use and recommend this remedy for this purpose.

During the past twelve years I have used atropia in collapse, and have found it, indeed, an admirable remedy. Have used it in cases of collapse in malarial fevers, also in collapse from strangulation of the intestine, and many times in cholera.

In 1866 and '67, I used it frequently and with marked success in cholera, and in 1866 published an account of its use in sixteen cases of cholera in this JOURNAL.

The appearance of Dr. Weber's article, with his claim to be the first who has used this remedy for this purpose, confirms the

opinion that the report of the sixteen cases of cholera has not received the attention it merited.

[We reprint from the November and December number of *THE JOURNAL* for the year 1866 the article referred to.—Eds.]

TREATMENT OF CHOLERA BY ATROPINE AND SALINE SOLUTIONS.

Aware that the time of the readers of your *JOURNAL* has already been taxed by the theories and speculations of many writers in regard to the pathology and treatment of cholera, I can hardly bring myself to the task of still further consuming it, but will do so for just this once, first assuring them that I will be brief.

In sixteen cases of cholera, all in profound collapse, blue, cold, shriveled, and pulseless, some with rapid, irregular, and difficult breathing, I pursued the practice to be detailed.

I injected into the areolar tissue from one-sixtieth to one-thirtieth of a grain of atropine.

FIRST CLASS—FOUR DEATHS.

In four cases there was no perceptible effect; the patients all dying in from three to sixteen hours.

SECOND CLASS—TWO DEATHS.

In two cases, within an hour, the pulse became perceptible and distinct, the skin warm, even red; one of these died in eight, the other in fourteen hours. No water was taken by the mouth or injected into the bowels in either of these cases. One case was that of an old man of dissipated habits; the other young, robust, and of good habits.

THIRD CLASS—THREE DEATHS.

In three cases reaction was pretty well established within an hour after the injection of atropine. In these cases, warm water containing common salt, was injected into the bowels every half hour, from half a pint to a pint at a time, and in no case was it discharged. Cold water was also freely taken by the mouth without a return of vomiting; the water was rapidly absorbed; thirst was allayed: the vessels were filled; the wrinkles left the skin; the sunken eyes became again prominent, and afterward there was no cramp.

These cases require to be mentioned separately: One of them I saw at 12 M., and immediately began the treatment. At 1 P. M. the pulse was distinct, the skin warm; during the afternoon the vessels filled; the skin became plump; the breathing much improved, though still frequent. I corded the arms and legs, and the breathing improved, but on removing the cords, the breathing was again hurried. This I repeated twice with the same effect, allowing the cords to remain half an hour each time. At 8 P. M. the pulse began to fail; the skin became cool, finally cold

She died at 9 p. m. The vomiting, purging, and cramps did not return. No discharge of urine.

In another of this third class of cases, the pulse came up in forty minutes after the injection of one-thirtieth of a grain of atropine, and the skin became too warm. Water was injected and absorbed, so that in twelve hours after I first saw her, she had every appearance of making a rapid recovery; the pulse was very good, the breathing easy, the skin warm, though she had discharged no urine. In twenty hours after I first saw her, she became pulseless and cold, but without a return of vomiting or purging. I injected atropine; she again reacted, and soon a small quantity of urine was discharged; diuretics were administered. During the day she was flighty, and could not always recognize her children. Eighteen hours after the last injection of atropine she was again pulseless and cold, though there was no vomiting, no purging, no shriveling of the skin. I injected atropine a third time, and she again reacted. Gave injections of warm broth; ordered wine and beef tea; continued diuretics, as there had been only a small amount of urine discharged. She was now delirious, and began to sink again in fifteen or twenty hours after the last injection, and died seventy-six hours after I first saw her.

The third case of this class responded rapidly to atropine, and ten hours after, by injections of warm water, the pulse became distinct, the skin warm, the vessels full. The patient died twenty-three hours after I first saw him, having sunk rapidly for two or three hours before his death.

FOURTH CLASS—SEVEN CASES RECOVERED.

Seven of the sixteen patients treated with atropine recovered, six of them rapidly and completely. In one case of the six, the patient took by injection half a pint of the infusion of buchu, one ounce of buchu with half an ounce of common salt to the gallon, every half hour for twenty-four hours. During this time, though the tea was retained, she had three dark, bilious evacuations, having taken a large quantity of calomel. The kidneys acted freely, and twenty-four hours after I first saw her, no one would have supposed she had had cholera, so complete was the recovery.

The seventh case did not recover so promptly. This was an exceedingly sensitive, nervous woman, of strong will, and that *will* fully enlisted for her recovery; she determined not to die. This case responded promptly to one-fortieth of a grain of atropine. Water was allowed as a drink, and warm water, and sometimes beef tea, injected into the bowels. The patient was very much nauseated, and there was frequent disposition to go to stool; not so much immediately after the injection of warm water, for this seemed to allay for a time the irritation of the bowel; but when she went to stool only a little mucus, with a small quantity of water was discharged, so that both by the

mouth and anus, not one-tenth of the fluid taken was discharged. The vessels filled, the skin flushed, and lost its wrinkles. Twelve hours after the first injection she was again pulseless. A second injection of atropine restored it. Beef tea injections, and as much as she could be induced to take by the mouth, was ordered. Nausea and disposition to stool continued. No urine was discharged. The patient talked vivaciously and extravagantly, like one in the first stage of uremic poisoning. Twenty hours later she was again pulseless. I injected atropine, and a third time the pulse responded; urine was discharged abundantly, and the patient recovered rapidly; so that on the seventh day from my first visit, she took a boat for Quincy, Illinois.

REMARKS.—This last case, and that in class third, in which reaction occurred three times, are particularly interesting, since both responded readily to atropine; both suffered from uremic poisoning; both had repeated periods of depression; both, to my mind, showing clearly that the patients were still laboring under the choleraic poison, or under a poison the offspring of either the disease or the treatment. To my mind, it was clearly uremic poisoning, and was the legitimate consequence of the intense congestion of the kidneys present in this disease.

In this age of philosophy, we very naturally seek a reason for any special course pursued in the treatment of disease. Believing this question has already been in the mind of the reader, I will answer briefly. The prominent pathological changes observed in the bodies of those who have died of cholera, are: Congestion of all the abdominal viscera except the liver; congestion of the lungs; and, from the retarded flow of blood through these organs, a damming of the blood in the right side of the heart. The ganglia of the sympathetic nerve are also congested, and in these, as well as other parts congested, the products of inflammation have been found. Here are precisely the conditions we would expect to find, if there was suspended action or paralysis of the sympathetic nerve, viz.: a relaxation of the walls of the blood-vessels, particularly of those organs most abundantly and exclusively supplied by this nerve. Here, then, we have precisely what we have when the sympathetic nerve is cut in the neck, occurring in the eye, the ear, and the side of the face. A congestion, an increase of blood, an inflammation ensues, and if it continues long enough, the usual products of inflammatory action remain as records of these changes.

Now what shall we do to relieve this congestion? Give purgatives to draw off the fluids, thus relieving congestion? Use the lancet to diminish local congestion, at the expense of a circulation drained to the lowest living point? Give brandy to further increase the carbonaceous elements of a blood already poisoned, so that it can not be aerated in the lungs? Give carbonate of ammonia to still further contaminate a blood loaded

with urea, the very material out of which ammonia is manufactured?

When a galvanic current is sent through the parts suffering from congestion, the result of paralysis of the sympathetic nerve, the vessels are stimulated to contract upon and repel their contents, and the parts which before were congested, are immediately relieved of their congestion, the temperature reduced, and the symptoms of active inflammation are dissipated.

Atropine diminishes the irritability of the spinal cord; atropine produces a rapid contraction of the engorged vessels of the conjunctiva; atropine stimulates the action of the sympathetic.

The injection of saline solutions into the bowels is sufficiently indicated by the loss sustained by the blood.

Now, I do not believe atropine will cure every case of cholera; I do not believe it will CURE any case of cholera. But I do believe its judicious use will so relieve the congestion consequent upon the action of the choleraic poison, that remedies may be introduced into the system; that we are enabled to replace the lost serum of the blood by the best substances known to us; and that in cases where the poison has already been eliminated, and the patient is in danger of death from simple exhaustion, that this affords us an opportunity of supplying the waste, and thus saving the patient.

ARTICLE XLI.

MEDICAL EXPERTS AS WITNESSES IN COURTS OF JUSTICE.—IV. By F. T. LEDERGERBER, Esq., of St. Louis.

The opinion of the majority of the Supreme Court of Indiana, in the case of *Bochman vs. the State*, is published, and is in effect, that under the constitution of Indiana, cited in the March number of this JOURNAL, and which is as follows: No man's particular services shall be demanded without just compensation. The defendant, Dr. Bochman, could not be compelled to give his professional opinion without receiving extra pay therefor. The opinion says, that in Indiana attorneys cannot be compelled to defend paupers, or render the court any professional assistance without suitable remuneration. If that be true, and there are

very few, if any, States, besides Indiana, where such is the case, it would be manifestly unjust to compel any professional man or expert to give an opinion without extra compensation. The opinion of the minority is not yet published, but that of the majority is the law of Indiana in construing that provision of the constitution until reversed, and entitles all who give opinions to extra and adequate compensation.

In nearly all other States the court has the right to appoint an attorney to defend a case, and he cannot demand compensation therefor. The court may at any time, ask the opinion of any attorney attending the court, for his opinion on a given subject. In Iowa, as in Indiana, legislation has tried to be just to all witnesses giving their opinions in evidence, and enacted a statute which provides that, "witnesses called to testify only to an opinion founded on special study or experience in any branch of science, or to make scientific or professional examinations, and state the result thereof, shall receive additional compensation, to be fixed by the court with reference to the value of the time employed and the degree of learning or skill required.

In a case for such additional compensation the court denied it, on the ground that it did not appear that the witnesses were *called* for such a purpose.*

The legislatures all meet this fall or winter, and in the States where no suitable law is now in force, the profession should see that competent men are elected this fall for members of those bodies.

* *Snyder vs. Iowa City*, 40 Iowa, 646.

Translations from the German.

ARTICLE XLII.

ON TREATMENT OF DETACHMENT OF THE RETINA. By DR. LÄSINZKI. [Translated from *Klinische Monatsblätter für Augenheilkunde*, March, 1878. By WM. DICKINSON, M. D.]

CASE I.—A strong and robust laborer of 29 years came under the treatment of the author Aug. 5th, 1874. The right eye presented opacities of the vitreous body, and detachment from choroid; retinitis at the macula, the left eye, chronic iritis; secondary cataract; detachment. The pupil of the right eye responded to atropine; globe strongly myopic; tension less than that of the left. Pupil of the left but little affected by atropine; only quantitative perception of light in either remained. As a tentative operation he performed iridectomy upon the left eye, designing subsequently to remove the cataract by extraction. After the operation both eyes were bound up with a cross bandage and the patient put to bed in a darkened room. After two days the attendants informed us that the patient began to see with his right eye, though yet untouched. Eight days later he could count fingers with the same eye at two feet distant. At this time it was ascertained by the ophthalmoscope that the detachment had disappeared and the globe had regained a tension equal to that of the left. On August 16th, three days later, he could discern No. 3 of Jaeger, held near the eye. On Jan. 27, 1875, no trace of detachment remained; and with the right eye aided by a convex glass of four inches focus he could discern No. 2 of Jaeger.

CASE II.—Detachment in the right eye and traumatic cataract in the left, in a weak, cachectic looking countryman of 41 years. About thirteen years before presentation, a splinter of wood had injured the left eye, from which blindness had gradually ensued. With it now he had scarcely quantitative perception of light.

The same degree of vision existed in the right eye; the pupil reacted but slowly to atropia and the globe was soft. The detachment extended from above the macula over to the papilla, and was nearly complete. The patient was treated with aloes and colocynth, and ordered to lie on his back in bed in a darkened room for a week, with a compress bandage over his eyes; then for a week in a darkened room without the bandage; then to remain sitting in a dark room for another week. At the ex-

piration of these periods the patient could count fingers at five feet distant, and without difficulty could go in places unfamiliar to him. Thus the vision had greatly improved, notwithstanding the globe remained soft and extensive detachments still existed.

CASE III.—A strong woman of 21 years came under treatment Aug. 7, 1876. Diagnosis—in the right eye myopia and staphyloma posticum, and in the left, detachment. The left globe was soft, the pupil responded feebly to atropia and the fingers could scarcely be discerned at any distance. The detachment involved nearly the entire extent of the fundus. The patient stated that in April of the current year she was first incommoded by defective vision during her work. By testing each eye separately she observed that with the left eye she saw very imperfectly upwards and towards the left. Spectra appeared before the eye which she vainly attempted to brush away. This condition constantly deteriorated till she could scarcely see anything. Eccentric vision greatly diminished, especially in the upper zones.

The treatment consisted in the patient being placed in a supine position, in a darkened room and pressure bandages as in the preceding cases for *eight* days; succeeded by *eight* days with a light screen before the eyes. During the ensuing *fourteen* days, the patient was permitted to sit erect in bed for several hours, but still kept in darkness. After this time the entire retinal detachment disappeared and only a white choroidal stippled spot of triangular shape was plainly visible. The globe had regained the normal tension and the normal visual field. On July 9th, 1876, at ten feet she could count fingers, and with a negative glass of 3 inches, her power of vision was one-tenth. An examination four weeks later detected no change.

We may remark that in the hands of Dr. L., most remarkable results in these cases were achieved by very simple agencies, viz: the darkened room, supine position and pressure bandages continued for at least eight days, followed by the successive cessation of them. They are worthy of adoption in all similar conditions.

Such cases are fortunately quite rare: Dr. L. ascertained their occurrence to be 92 in 40,000 patients treated at the Infirmary in Breslau.

ECTOPIA LENTIS. By DR. L. MANDELSTAMM.

Sippel regards this affection (crystalline lens not in its normal position), congenital abnormal position of the lens as a sequel of arrest of development. These cases are quite frequently met with in ophthalmological literature. A. V. Graefe first furnished us with an accurate description, since followed by Jaeger, Stellwag, Becker, Oettingen, Schiess, Jeaffreson and Hjort.

The exophthalmus of the left is greater; the lids cannot voluntarily be closed; the cornea is softened and infiltrated with pus.

This case occurred in a young man 17 years of age, very tall, badly nourished, who had several sisters, but like their parents, had sound eyes. His vision from early childhood had always been defective, though he had never suffered from inflammation of the organ. With each eye his vision is but one-tenth, and not improved by glasses; can read No. 7 Jaeger at 2 inches.

The globes are somewhat prominent and of larger dimensions than normal; the corneae, however, were comparatively small. The excursion of either eye outwards was somewhat restricted; the closure of the lids normal. The pupils are of medium size and cannot by atropia be dilated to the maximum. By oblique illumination the lens is distinctly visible, strongly reflecting the light, and somewhat diminished in extent; it is so misplaced outward and upward that the symmetric pupil of both eyes is divided into two parts by an obscure convex line, which extends from the inner and upper portions downward and outward; the upper portion containing the lens and the lower destitute of it; the latter has a breadth of one half a line. The iris is tremulous. Refraction through the lens, the pupil being dilated (stenopaic), is excessively myopic, one-half; through the lensless (aphakic) portion one-twelfth.

GLIOMA OF THE RETINA.—By DR. HOSCU.

Wm. H——, a child 21 months, was received into the hospital, Jan. 31, 1876. At birth, May, 1874, his eyes were apparently perfectly healthy. Four months later, his parents observed that the right eye was dim, the pupil hazy and the sclera of a reddish color; next, exophthalmus gradually supervened. The eye was lost about the middle of November, 1874. Subsequently the child was cheerful, had an appetite, played, prattled and appeared very intelligent. Towards the close of Dec. 1875, a swelling appeared near the affected eye, which very slowly increased; afterwards the general condition deteriorated. The child evinced no more an inclination to play, had no appetite, was languid, peevish and cried most of the time. About the middle of 1876, the left eye also began to protrude from the orbit; when admitted into the hospital, the lids of this eye could not be closed on account of the exophthalmus.

On the right temple there was a very large, flat, dense tumor attached to the bone, indistinctly defined except upon its posterior aspect. The skin covering it was somewhat movable, presented veins very distinctly, especially at the anterior margin, where they were united into a small net-work. The tumor presented indistinct fluctuations in its interior; the lid-fissure of the right eye was but half open; staphyloma of the cornea was total.

At the inner edge of the cornea there is a deep ulcer; the upper half of the cornea is but little affected; the pupil considerably enlarged by atropia; hypopion. Nothing could be ascertained of the fundus on account of the opacity of the cornea.

The left temporal fossa was filled with a broad, elastic superficial tumor. The child now presents a stupid aspect, takes no notice at all of objects around him, and his extremities are extremely atrophied. Atropia was instilled into the left eye and a compress and roller applied.

On the night of Feb. 5th, the cornea of left eye ruptured; softening of the entire cornea had taken place. The globe was very soft and hypopion extensive.

The tumor on the right side had considerably increased, in consequence of the great œdema of the skin covering it, which extended even to the lids of the right eye. From that time the patient became insensible, temperature much elevated, and on Feb. 27th, he died.

On examination the left eye was wasted, but free from glioma. The gliomatous mass, involving the right globe, had perforated the sclera, but had formed no intimate connection with the bones of the orbit. In the globe no trace of retina could be found.

REMARKS.—If at any time during the first nine months of the existence of this patient, the diagnosis had been correctly made, and the affected globe enucleated, the entire disease, still incarcerated within the globe, would also have been removed, and it is more than probable that perfect immunity from its recurrence would, at the same time, have been secured, and a new lease of life granted to the little patient.

ARTICLE XLIII.

THE PROFESSION AND THE PUBLIC. [Translated from the "*Wiener Medizinisch Presse*," No. 42, vol. xvii. By EDW. EVERS, M. D., of St. Louis.]

In No. 28 of the "*Wiener Mediz. Presse*," we have called attention to the fact, that the New York code of medical ethics, adopted with slight changes by the medical association of Munich as a guide to physicians in their professional intercourse, fails of its object, however beautiful, noble and elevating the sentiments it expresses may be—fails, because of the too great stringency of its demands, and the too little regard for the actual conditions of practical life.

The code is tainted, too, with an affliction which is becoming

more and more prevalent each day—it is afflicted with a certain degree of “hyper humanity” and therefore can find its realization only where it found its origin—in theory.

But theory is a conceited mother. She always entertains the very highest opinion of her children, she overlooks their faults, smoothes over their naughtiness, overrates their capacities; but whether these dearly beloved children are fit for practical life, whether their imaginary virtues will bear the test of the world, is a question altogether different.

As they stand before us here, these theory-born paragraphs and paragraphlets of the code, so richly dressed, one more beautiful than the other, one “nicer” than the other, we could almost fall in love with them. But do not, by any means, take them out into the street with you; the open air does not agree with them—they become inconvenient, for they are not sound and healthy.

I fell in love with one of these charming paragraphlets the other day; how neatly and elegantly it presented itself; how clearly and precisely it expressed itself; how well even the wise “air” it assumed fitted it! Now, I thought, you must take that darling boy with you to your own pleasure and honor. But, oh Lord! we had hardly gone beyond the office to the neighbor’s house, when he became obstreperous, and so impeded my further progress, that I could only send him home as soon as possible with my compliments to his mama. * * *

That a code which proposes to legislate concerning the relations of the physician to the public, should dispose of the important question of fees in two short paragraphs, would be an advantage if the paragraphs were as good as they are short. But this they are not because they demand and ordain that the fees to be charged for visits and consultations shall be governed “by certain general rules and that it should be made a point of honor to conform to these rules with the greatest possible uniformity.”

“Certain general rules” this code demands.

In our opinion there is but *one* general rule in regard to fees, and that is, that there is *no* general rule in regard to fees. All efforts to secure uniform fees must necessarily be fruitless, for they violate an unchangeable law of nature. It is one of the elementary principles of political economy, that *ceteris paribus* the compensation for any effort will be in direct ratio to the demand for it. How, for instance, could a celebrated lawyer keep his practice within the limits of his physical and mental capacities, if he did not keep away the poorer class by demanding high fees? If this be true of the lawyer who can transfer a part of his labor to others, how much more must it be true of the popular physician, who in the performance of his duties and obligations must depend on the prestige of his own person only? Now, could this person, who like every other person, must find

time to rest, to eat, and to sleep, obtain it, if it were not a costly affair to disturb him in such occupations? Time is not only money, but also stock in trade. Shall not he who has little of the precious article, charge higher for it, than he who has much "stock on hand," that he does not know what to do with it? Shall the young, unknown physician, longing for "something to do," whenever his services are called for, be governed by "certain general rules and regard it as a point of honor to conform to these rules with the greatest possible uniformity?" Shall he waste his time, of which he has an unsaleable superfluity, rather than sell it cheap? like "the great merchant who restored his pearl to the rich rather than sell it below its value?"

If his circumstances permit it, he may try the experiment, but if, as is the case with most physicians, he depends upon the proceeds of his practice for the support of himself and his family, this pride, this dignified reference to the code of medical ethics, would be as great folly as that of the man who determined to starve to death rather than eat bread instead of—cake.

Let us look at the subject from the patient's point of view.

Take on the one hand the case of some poor consumptive, the diagnosis and treatment of whose disease presents no difficulties; and on the other hand the case of a lady suffering with hysteria. Next to the misfortune of being afflicted with the disease, there is no greater misfortune than to have to treat it.

Now, while a visit in the former case of a few minutes, often a mere formal call will suffice, we are heartily glad to get away from the latter in fully half an hour. Now shall both of these, in spite of their unequal demand upon our time, our patience and our efforts, be compelled to pay the same fee? Shall we still regard it "as a point of honor to observe certain general rules with the greatest possible uniformity?" What injustice! Now while the rules regarding fees are practically worthless, all we can say of the rules for the conduct of the physician to his patients is this: The intelligent and refined physician does not first learn these rules from the code of medical ethics, while the unrefined will probably not be benefitted by any prescribed rules.

The same is true of the many paragraphs of Art. II., "Duties of patients to their physicians."

The better class of the public has always observed these rules so self-evident to every person of refinement who does not have his "savoir faire" from such paragraphs, any more than an honest man learns his honesty and prosperity from the books of civil law. The other class of the public will care precious little about any code of medical ethics.

One more example:

Art. II, §2. "The first duty of the patient is to entrust himself only to a scientifically educated physician." By what standard shall the public judge whether a physician is "scientific

ally educated?" Shall the doctor before taking charge of each patient, submit to a "colloquium"?

§6. "The patient shall obey the directions of his physician immediately and accurately." But suppose he will not? That will be ruinous to your own interest and contrary to all dictates of prudence. Shall you leave him? Then you violate §6. Which side, then, are you going to take? That of the grim, bearded §6, or that of the charming goddess—Prudentia! Be gallant!

Proceedings of Medical Societies.

ST. LOUIS MEDICAL SOCIETY. LOUIS C. BOISLINIERE, M. D.,
President.

[Revised by the Committee on Debates for THE JOURNAL.]

MEDICAL SOCIETY HALL,
POLYTECHNIC BUILDING,
ST. LOUIS, March 2nd, 1878. }

Seat of the Emotions.

DR. STEVENS read a paper based upon some views of Dr. Buck, of Canada, in which he declared the sympathetic nerve to be the seat of the emotions.

DR. FORD:—I am inclined to look upon the cerebellum as the physical seat of the emotions. The cerebellum contains no motor centers; its middle lobe certainly seems to preside over the genesis sense. I reported a case in the *N. Y. Medical Journal* for August, 1876, where a man was struck upon the left side of the base of the skull, was insensible for forty-eight hours, and afterwards suffered a total loss of virility, which during five years has but partially returned. He has lost desire as well as power.

DR. STEVENS:—Argument by exclusion in this case should have no weight; we should look at the evidence furnished by pathological conditions of the testes, showing their intimate relations with the genesis sense. The case reported by Dr. Hughes recently should be borne in mind, in which there was abscess of the cerebellum and no disturbance of the emotions. Dr. Ferrier is alone in attempting to show that the genesis sense is located

in the cerebellum. When the stomach, liver or uterus is diseased we may have emotional disturbance.

Hepatic Abscess.

DR. PREWITT reported a favorable condition of the case of hepatic abscess mentioned at a former meeting. A bandage, he said, was used to prevent any change in the position of the liver, so that injury might not be done to the surrounding parts by the needles introduced to secure adhesion. Firm adhesion had taken place and the man was doing well.

DR. MOORE mentioned that Stokes, of Dublin, asserts that we can make an abscess point anywhere. The pus will seek exit through the parts presenting least resistance, and if an incision is made in the region of the liver the abscess will point there. The aspirator is often of service, and in one case at least there was no refilling of the abscess.

DR. FORD:—Though in favor of the use of the aspirator, it should be used with care. Too large a needle is dangerous and too small a one will not permit the pus to flow. Besides this, when tension is diminished, collapse of the abscess may take place, the two surfaces of the peritoneum may separate and pus escape into the abdominal cavity through the opening made by the cannula.

DR. GUHMAN reported two cases of hepatic abscess treated by the aspirator.

MARCH 9, 1878.

Cancer of the Stomach.

DR. PREWITT reported a case in the practice of Dr. Brokaw, of cancer of the stomach, and presented a specimen of the same. The subject was a man 34 years of age and of a healthy family. The whole stomach was affected, its walls so much thickened as to reduce its capacity to a narrow tube the size of the duodenum.

DR. BROKAW gave a brief history of the case from the time it came under his observation. Several prominent physicians here and in New York had failed to diagnose cancer. The symptoms were obscure even in the late stages of the disease. There was no vomiting of blood and the tumor could not be distinctly traced. These statements were corroborated by Drs. Hodgen and Barret.

DR. WM. PORTER said he had examined specimens of the mass with the microscope; they were characteristically scirrhus. He illustrated their structure on the blackboard.

DR. HUGHES reported several cases confirming the views of Dr. Richardson, that cancer depends somewhat upon a derange-

ment of the nervous system. The frequency with which the stomach is attacked by cancer is probably due to its abundant supply of nerves and its liability to irritation.

DR. JOHNSTON said that if cancer could arise through nervous influences, it could not be at first a local disease. He believes it had its origin in the blood cells.

DR. FORD:—Cancer of all kinds seems to originate in an abnormal growth of epithelial and endothelial tissue into its basement membrane. Internal forms of cancer seem to originate in the lymphatic spaces or capillary lymphatic system. Various irritations and probably stagnation of lymph in congested parts were often the determining causes of cancer.

DR. STEVENS thought the theory of the influence of the nervous system in cancer, though somewhat new, would be more generally entertained in the future.

DR. PREWITT insisted upon the local origin of cancer. If due to nervous influence, it must be constitutional, so that operations for extirpating it must necessarily fail. But we know that some forms of cancer—especially epithelioma—if removed early, may not return.

DR. MOORE:—There must be a cancerous diathesis. We can have no hereditary disease without a diathesis; this, when strongly developed, is expressed in the ultimate cachexy.

DR. HODGEN:—A seed must be sown before we can have the plant, and there must be a soil favorable to its growth. In cancer the favorable soil is the diathesis, yet with this if there be no local cause the disease may not arise. He believed in the local origin of cancer and that the diathesis favored its development; also that epithelioma might be grafted upon a healthy subject, perhaps even more readily than healthy cuticular tissue.

MARCH 16, 1878.

DR. J. M. SCOTT presented a morbid specimen, and gave its history as follows: For nine years the patient from whom it was obtained had suffered with dyspeptic symptoms. Almost all his food was thrown up in a short time after eating; he also had "dyspeptic colic," and sour eructations. Had been a farmer, and came to the city for treatment some four months ago. After several physicians had seen the case I was called in, and found the patient much emaciated, and subject to the constant vomiting before mentioned. He had no great pain, but complained of a choking sensation at times, and of a slight burning or irritation under the sternum. I believed the case to be cancer of the stomach, but did not make a positive diagnosis on account

of the absence of cachexia, and because no tumor, nor enlargement could be determined. On several occasions, particles of food had been vomited which had remained in his stomach for a long time; in one instance, some hominy had been ejected *four weeks* after it had been eaten. He died yesterday, and on post-mortem examination we found cancer of the pylorus, with considerable thickening of the gastric walls; the opening through the pylorus was contracted to the size of a crow's quill. In making the examination we found five *persimmon seeds*, which had been in the stomach since last October.

DR. BOISLINIERE:—Had there been any coffee-ground vomit?

DR. SCOTT:—Not recently, nor had there been any hæmorrhages, but there was a very constant vomiting of grumous, ashen colored matter.

DR. BERNAYS:—I examined the tumor presented by Dr. Scott and found it to be scirrhus of the pylorus; there was no excoriation of the mucous membrane; the pyloric opening was very much contracted; the microscope showed small nests of epithelial cells between the layers of the fibrous tissue; the greater part of the tumor lay in the sub-mucous structures and muscular layer immediately under the peritoneal covering.

DR. LUTZ:—I here present a specimen taken from a man fifty-two years of age. I made a diagnosis of cancer, of which there was every symptom, except the presence of a tumor. In a case of cancer of the pylorus which I recently exhibited here, no tumor could be felt; this experience, together with the symptoms which I shall presently detail, induced me to make the diagnosis as I did in the present case. In this patient, there was severe pain, great flatulency, and constant vomiting. The vomit was in a state of fermentation—mixed with blood, of a coffee-ground color, and enormous in amount; there was also obstinate constipation and progressive wasting, so that in five years the man was reduced from 250 lbs. to 140 lbs. Altogether, I think, there was good foundation for the diagnosis I made; nevertheless, on post-mortem examination, I found, as can be seen, *an ulcer*, on the posterior side of the pylorus, near the orifice; the stomach being much dilated and filled with the peculiar fluid vomited during life; the mesenteric and neighboring glands were much enlarged, but there was no cancerous deposit in any structure.

DR. COLES:—In 1869, I met with an interesting case of cancer in a lady 57 years of age. A few days before I was called in to attend her; her husband had told me that twenty six years before, she had had a scirrhus removed from the breast; after consulting Dr. Nathan Smith and Dr. McGuire, both pronouncing it malignant, the latter, living at Manchester, removed the growth, and was in the habit of referring to this case as one of perfect recovery after removal of a cancer. About a week after

this conversation I was called to see the lady, who imagined she was menstruating, though that function had long ceased. I made an examination and found the whole vagina plugged up by a large encephaloid cancer growing from the anterior wall of the vagina, through which the urethra passed, though as yet without injury. The liver became involved and the patient died in about two months. There were several large growths in the liver; the mass in the vagina had extended into, and almost filled the pelvic cavity. I think this is the longest case on record of exemption from cancer after removal of malignant growth. There is something worthy of note in the fact that she died of *encephaloid* cancer, for we well know that where such growths are removed they will return in some other part of the body, while it is comparatively rare to find scirrhus established in a different locality after extirpation; hence we infer that if a cancerous growth appears in a different part of the body after removal, it is of an encephaloid or fungous character. Several other members of the family were disposed towards cancer, a fact to which I refer merely with regard to its bearing upon the existence and inheritability of a cancerous diathesis.

DR. BOISLINIERE:—Was there insanity or tubercular disease in the family? I ask this because it has been asserted here that insanity predisposes to cancer.

DR. COLES:—The family was remarkable for the longevity of its members. There was neither insanity nor tuberculosis in it.

DR. FORD:—It is the impression in the South and Southwest that cancer is much more common there than in colder, dryer climates.

DR. JOHNSTON:—From plastic matter, a little albumen and a certain amount of heat and moisture under certain conditions the cell is formed. Owing to a peculiar diathesis the component parts of this cell may so arrange themselves under the influence of direct or indirect irritation that a cancer may be developed. It is in this way and not through the nervous system that cancer is developed. Arsenic seems to have a good effect in the treatment of cancer, and this is accounted for by its action on the nutrition of the tissues.

DR. JNO. S. MOORE:—Cancer is always dependent upon a certain diathesis and this diathesis is almost universally hereditary. When this hereditary diathesis exists it may be so strong that it may develop a local disease *per se*, or it may require an exciting cause which is found in mechanical or functional irritation. As long as this irritation continues there is more or less danger of the disease. When an ulcer is established its products may pass into the circulation, the blood becoming charged with the carcinomatous matter, and the diathesis passing into a cachexia. If we operate and extirpate the ulcer before cachexia is established,

we return the patient to the same condition he was in before the cancer appeared, and if there be no exciting cause, the subject may live free from cancer. The carcinomatous matter is in the blood, I admit, but we must reflect that the character of the blood is determined by the blood-making organs, and impure blood is so by virtue of their derangement. Over these organs the nervous system presides, and in this way may exert an influence in the production of cancer; but further than this I cannot recognize its agency in this direction.

DR. PREWITT:—I have not been able to observe any special predisposition or constitutional enfeeblement, seeming to promote the development of cancer, but on the contrary have noticed that persons who belong to vigorous families and have been in all respects healthy, are occasional victims to cancer. Cancer may appear without any premonition.

DR. HUGHES:—In families in which insanity is hereditary, in which almost all the members manifest a tendency to epilepsy, inebriety or mania—where one member escapes these, it is not infrequent to find him attacked with cancer. Dr. Richardson, of London, regards it as plausible that the cancerous diathesis is in some way connected with neuro-pathology, and it is not by any means improbable. In the etiology of certain nervous diseases there is much that is similar to that of cancer. The children of eccentric parents may evince a decided tendency to insanity; these manifestations will possibly not be developed by the next generation, but break out in decided mania—incited by some slight strain which an ordinarily healthy person would resist. In looking forward or backward in the study of the insane diathesis and failing to find any neurotic derangement in either the ancestry or posterity, we may discover some form of cancerous affection. If it was true, as has been stated, that cancer is a blood disease, why is it that children in whom this fountain source is poisoned by descent from tainted parents so often escape? Whereas this is a characteristic of disease of the nervous system.

DR. HURT:—There has been an attempt to trace a relation between cancer and chemical physiology, but the latter is a misnomer. Under the influence of the vital force you can combine and multiply the components of material substance, but it is impossible to originate life through any action of chemistry. There is a physiological chemistry, but there is no chemical physiology.

DR. STEVENS:—I cannot assert that cancer has any connection with insanity, and among several hundred cases of insanity I cannot remember a single case of cancer. Still I think it may originate as easily in the nervous system as in the vascular. We cannot tell whether the blood dies from want of nerve action or

the nerves cease to act from want of stimulation from the blood, just as in a case of gangrene in an old man—we cannot tell whether the nervous system or vascular system fails first.

MARCH 23, 1878.

Extensive Abscesses.

DR. HURT reported a case of extensive suppuration of the lower extremity; the pus had formed in the subcutaneous tissue, and upon ultimate evacuation, the patient made a good recovery.

DR. MOORE:—I suppose the case reported by Dr. Hurt was tuberculous in character. There is almost as strong a tendency to a deposition of tubercular matter in the lymphatic glands and throughout the tissues of the body as in the lungs. The oedematous condition of the lower extremities suggests a few remarks on the pathology of dropsy, which may occur independently of local inflammation. It is not a disease, but a symptom, and consists in an undue accumulation of the watery elements of the blood, either in the cellular tissue or in one or more of serous cavities of the body. Dropsy is dependent upon one of three different pathological conditions, or upon a combination of two or more. The first of these is the loss of balance between the functions of secretion or exhalation and the function of absorption. From this, accumulations of serum may take place in the serous cavities, especially if the functions of the skin and kidneys are impaired. If a man does not sweat by the skin or kidneys, he will sweat from his serous surfaces. Another mode in which dropsical accumulations arise, is from obstruction; most frequently disease of the heart or scirrhus of the liver. The blood is dammed up and accumulates in the large venous tracts. This pressure causes its serum to leak through the coats of the vessels. One of the functions of the capillary veins is to absorb fluids from cavities, and this they do in part in proportion to the low tension of the blood within their walls. If these vessels are gorged with blood, their absorbing power is almost destroyed, and is diminished in proportion to their relative fulness. The third source of dropsy is an attenuated condition of the serum of the blood, which transudes through the coats of the blood-vessels. Thus in albuminuria, where the blood loses its albumen, it becomes so attenuated that the blood-vessels are unable to retain its watery portion. This thinning of the blood occurs in pulmonary tuberculosis and also in chlorosis; and I think it probable that malaria likewise has an attenuating influence on the blood.

DR. BRIGGS:—I would here mention a well-known case that I saw in '72, at which time there was an abscess forming without any apparent cause of irritation. It was very difficult to localize, but we finally made it out, in the shoulders between the

scapula and the vertebrae. The abscess recurred during a period of from eight to twelve years. Another abscess formed in the leg. The case was peculiar, and was, I think, similar to Dr. Hurt's.

DR. POLLAK:—The gentleman mentioned by Dr. Briggs died of an abscess in the leg, caused by necrosis of the femur. His disease was tuberculous. He belonged to a family of ten children, all of whom died of phthisis pulmonalis. As early as 1860 he suffered from a swelling in his leg, which resulted in abscess.

DR. FAIRBROTHER:—I cannot see how the symptoms described in the paper, necessarily depended upon the causes assigned, viz.: inebriety and exposure. There must have been a purulent cachexia (if we may use the term), for the production of such effects. I have a case associated with spinal curvature with this cachexia. One point in Dr. Hurt's case attracted my attention. The abscess was not opened until the thigh had become as large as the body, and had run on for a long time, probably causing much pain and resulting in the discharge of an enormous amount of pus. This must have been a great drain upon the patient's system, and in such cases it would certainly be of benefit to the patient to withdraw the pus before it had accumulated to such an extent. It has been my practice when suspecting the existence of abscess, to puncture with a small trocar, and allow the pus to escape. I strongly favor an early letting out of pus.

DR. HURT:—It is good practice, sometimes, not to wait till the pus has formed. An advancing abscess may be cut short by the early evacuation of the pus. In this case, had the abscess been opened earlier, it would have been better, no doubt, but we could not predict the formation of pus, nor certainly know it would form in the limb until it had really accumulated, and there was perceptible fluctuation. The formation of the pus seemed to have occurred within twenty-four hours, and we might not have found it earlier. It is evident that the pus did not arise from disease of the periosteum; the abscess must have been located in the cellular tissue. I may have been wrong in assigning alcohol as the cause of this man's trouble. Some believe that alcohol preserves a man as it does a morbid specimen, and this man was almost a morbid specimen. But there is a difference between the immediate and subsequent effects of alcohol. I believe that one-half or two-thirds of all the diseases I met with in the City Hospital were due to intemperance, and the great mortality of the poorer classes in our hospitals is due to the same cause.

DR. WESSELER:—A boy fourteen years old came to me complaining of a great pain in the knee. I learned that he had one night fallen into an open cellar, and hurt his shoulder and knee, but he was able to go to work next day in a brewery. I found a

separation of the epiphysis at the knee; I sent him to bed, but during the ensuing week he suffered great pain, which was relieved by salicylic acid and quinine; a few days afterwards I detected pus in the knee-joint; a little later an abscess in the shoulder, still later an abscess in the other leg, and then abscesses were formed all over his body, even upon the throat. There was no sweating, but there was fever. When I put in the knife it seemed as if the whole cellular tissue was drowned in pus, and the discharge was very great. I gave him quinine, beef tea and good nourishment. Spicula of bone were discharged from the shoulder. At present he is convalescent. There was no phthisical diathesis, but as he worked in a brewery he may have taken enough alcohol to interfere with the assimilation of food, thus favoring disease.

DR. HUGHES:—I beg leave to report three cases which came under my observation during the war, of abscess without apparent cause. Two of these patients had been quite steady, temperate, young soldiers, and descendants of good families. The first signs of trouble were on the parotid gland; the abscess began like an attack of mumps, and finally disintegrated the gland; its progress was accompanied by symptoms of typhoid fever that was then prevalent in the hospital. One of these patients died. The ulceration had destroyed the gland and the whole cervical region, from the median line to the posterior muscles of the neck; the artery and pneumogastric nerve was laid bare. I used quinine and wine, and made use of creasote injections. The next case, under the same conditions and similar treatment, recovered. There was no phthisis pulmonalis complicating these cases. I do not think it safe to say that these cases of glandular involvement and ulceration are necessarily the result of a phthisical tendency. I believe that anything that may cause a general debility may induce this trouble.

DR. NEWMAN:—I presume that every member of this society is in favor of alcoholic stimulants as a medicine. In reference to the case referred to by Dr. Hurt, I think it is entirely proper, when we suspect a deep-seated abscess, that we make use of the exploring needle. Some years ago I had a case in which I suspected the existence of hepatic abscess above the margin of the lower ribs and determined the existence of pus by means of the exploring needle. The abscess was opened and discharged a large amount of pus. Finally the patient died. Patients have begun to recover immediately after the puncture of a hepatic abscess with the trocar, and it is evident that even important organs may be punctured in this manner without danger.

DR. THOS. SCOTT:—I think Saint Paul's advice "take a little wine for thy stomach's sake," may often be followed safely. I

am temperate myself, yet have been in the habit all my life of taking a little wine for my "stomach's sake." In a number of cases in which I have used alcohol I have no doubt that I have saved valuable lives. Several years ago, in a case of gastritis in a woman of about forty-five years old, the stomach would scarcely retain any nourishment; the patient became emaciated. I gave her champagne. One evening I was called hastily, as she was apparently dying. I promptly poured out a glass of champagne, which she drank. At this time the impulse of the carotid arteries were scarcely perceptible. She began to improve and I gave her a second glass. She eventually recovered. I am satisfied that the champagne saved the woman's life. I have had another case which I treated with champagne two years ago. I do not believe in this absurd crying down of a useful article. Except when taken in excess alcohol is not more injurious than tobacco, most probably not as much so.

MARCH 30, 1878.

Aneurisms.

DR. HODGEN:—I have here a specimen of aneurism of the middle cerebral artery of the right side, about the size of a hazel-nut, taken from a woman about 27 years of age. The only peculiarity of the patient, and one that was not well marked, was severe pain at times in the head. There was no evidence of disease. A week ago she became suddenly insensible, fell to the floor, and died in a few minutes. I found on autopsy a large accumulation of blood in the arachnoid cavity, which had escaped in consequence of rupture of the small aneurism, which I here exhibit. All the blood-vessels of the brain were more or less degenerated. The vertebral and basilar arteries were atheromatous. It is unusual to find atheroma at this period of life, where there has been a good record.

DR. FORD:—It is important in all such cases as the one just reported to know the previous history. Syphilis being excluded, the disease can only be attributed to a rheumatic arteritis. Arterial degeneration must now be held to arise from subacute arteritis, where there is a tendency towards chronic thickening and subsequent softening and fatty degeneration. Of late years much attention has been given to the relation of syphilis to aneurism. I have seen several cases in which there was evidently a close connection between the two conditions. It would be interesting to inquire whether hereditary syphilis has a causative relation to aneurism.

DR. WM. PORTER:—There is reason to believe that syphilis may cause aneurism, not only in the brain but elsewhere. I was informed of a case, very lately, in which softening of the brain was present, and surely due to syphilitic degeneration of the

arteries supplying the affected portions. In another case, nearly two years ago, I found a deposit at the base of the left lung, where there had been symptoms and a history of syphilis; I thought the deposit tubercular, but under the anti-syphilitic treatment, the pulmonary trouble became less. The patient died suddenly from hemorrhage. Without warning, the blood gushed from his mouth at night, and he was found dead on the floor. In phthisis, it is unusual for death to occur immediately from hemorrhage. At the autopsy, I found a ruptured aneurism of a large arterial branch of the left pulmonary artery. Beyond this point the vessels were occluded. The artery was thickened, as were also the neighboring branches, and there were several deposits of gummata on the lower lobe. From a somewhat inaccurate report of this case at the time, a writer in the *London Medical Record* questioned the diagnosis, but since then several cases have been reported like this. The subject of syphilitic degeneration of the arteries is by no means new.

DR. NEWMAN:—On one occasion I examined the body of a man who had had extensive atheromatous disease. He had been a hard drinker for ten years. He died of active inflammation and I did not suspect arterial lesion before the autopsy.

Hepatic Abscess and Gall-Stones.

DR. PREWITT:—In the case of hepatic abscess I mentioned recently, the symptoms became more grave and the man died. There was a discharge of pus from the bowels but it did not come away freely, and possibly there was a second cavity which I could not find. Previous dysentery had weakened him very much. Death resulted from exhaustion.

DR. FORD:—I remember an interesting case in which a hepatic abscess was opened by another surgeon. The patient died within three weeks, from prostration. Death occurs in such cases from interference with the double function of the liver as a blood-making and a heat-producing organ. In most instances the patient dies by adynamia.

DR. HODGEN:—It affords me great pleasure to confirm the tenor of the remarks regarding hepatic abscess; I have known but two cases where the abscess was opened in which recovery took place. One Dr. Prewitt reported a year ago; another was an inmate of the City Hospital, and recovered without a bad symptom. I have seen a number of cases in which the pus escaped through the lung and bowels, and the patient recovered. Statistics show that cases in which the abscess opens into the lungs or bowels are more likely to recover than those that open externally.

DR. BOISLINIERE:—Which is preferable; the knife or the aspirator, in these cases?

DR. HODGEN:—I cannot answer from my own experience; I have had no success with the aspirator, and of the cases in which the knife was used, five or six died, and but one got well. I have never opened an abscess until there was evidence that the liver was attached to the abdominal wall.

DR. STEELE:—In a recent case I aspirated a hepatic abscess and withdrew a few ounces of pus; afterwards the pus was discharged by the bowel, and the man got along nicely. Along the track of the needle there is yet a fistula, which discharges a little, and refuses so far to heal up.

DR. PREWITT:—A peculiarity of the case which I reported was the large quantity of bile which escaped through the opening. The tissue, too, became gangrenous around the margin of the wound, for an inch or more.

DR. NEWMAN:—The comparative mortality in hepatic abscess when opened through the abdominal wall, may possibly be due to the fact that perforation may occur before adhesion to the wall takes place, and thus pus escape into the peritoneal cavity and death ensue.

DR. FORD:—Hepatic abscess may be mistaken for perinephritic abscess, pleural effusion, and localized abscess from caries of the spine. Hepatic abscess may perforate the diaphragm and we may thus have what is equivalent to a pleural abscess. The aspirator is of great use in the diagnosis of hepatic abscess. Sometimes the organ in which a dubious abscess is seated may be determined by examination of the pus under the microscope. A point in diagnosis which has not, to my knowledge, been noted, is that in the pus from hepatic abscess, *cystine* is sometimes found. The crystals of cystine may be seen with a moderate power in large hexagonal plates. This substance is doubtless formed from the taurine of the taurocholic acid of the bile. When found we may be sure the pus has a hepatic origin.

DR. MOORE:—A distended gall-bladder may simulate hepatic abscess. In this condition, however, the tumor is not preceded by symptoms of hepatitis, though there may be pain caused by obstruction of the common duct; the symptoms of jaundice are much more marked in distended gall-bladder, and there is fluctuation from the beginning, while in abscess, fluctuation is preceded by induration.

DR. HODGEN:—In regard to the aspirator, I believe it to be a valuable instrument, but that it may be used too often, and in some cases may do harm. The tissue of the liver is very vascular, but firm; if the pus which distends the abscess cavity is forcibly withdrawn by the aspirator, the blood-vessels in the sub-

stance of the liver may rupture and extensive extravasation of blood follow. No abscess of the liver can be safely emptied at one time, and this should not be attempted except in very small abscesses. A free incision seems to me much safer, though there is great danger in this also.

DR. NEWMAN:—Search may be made for an abscess safely, but we should be careful not to puncture the gall-bladder. Distension of the gall-bladder cannot be attributed to obstruction from gall-stones, for these may fill the bladder and yet the bile pass freely through the common duct into the duodenum, and the patient suffer but little inconvenience. In a case I once had, the bladder was filled with gall-stones, and yet there was no symptom of disease until one of the concretions became engorged in the duct; perforation ensued, and the patient died.

DR. BRYSON:—It seems to me that the pressure under which the bile is secreted is not sufficient to distend the gall-bladder greatly; doubtless, it would require considerable pressure to distend it, except very gradually.

DR. MOORE:—Distension of the gall-bladder can only take place when there is obstruction of the common duct. If there be stones in the gall-bladder, and one or more pass into the common duct, and obstruction take place, the bile will flow down the hepatic duct, and regurgitate through the cystic duct into the gall-bladder, and thus distension be produced.

DR. GUHMAN:—I have had a case in which the gall-bladder was so distended that you could clasp it in the hand, and feel the stones. A stomach tube was introduced into the rectum, and injections given which caused many of the stones to come away.

DR. BRYSON:—Is it not true that the secretive power of the liver is not adequate to produce enlargement of the gall-bladder, though it may distend it? In the kidneys, when a stone drops into the ureter, the urine continues to be secreted until a certain pressure is attained, and when this corresponds to the blood pressure, the secretion of urine ceases. If the patient dies, the ureter and pelvis of the kidney will be found distended but not enlarged; it seems to me that the same thing would occur if a gall-stone should lodge in the common duct.

DR. MOORE:—The illustration is a happy one, but would be better by supposing the stone to become fixed in the urethra instead of in a ureter; the bladder then would become enormously distended, and this condition would simulate that of the gall-bladder I referred to. In either case, secretion is diminished. There is an equipoise between the demand and supply.

DR. STEVENS:—I have seen a number of cases in the dissecting room in which the gall-bladder was filled with gall-stones.

In one case I counted ninety-two stones, but I do not think that in any of these cases the gall-bladder was distended. In some instances the stones are beautifully joined together, most of them triangular in shape and pyramidal.

DR. PREWITT:—Two years ago I had a patient with a fluctuating tumor in the right hypochondriac region, soft and readily felt, projecting below and from beneath the liver. The patient had had syphilis some years before; had married and had a healthy child since. I could not satisfy myself that there was any connection between the syphilis and the tumor. I suspected it to be an enlarged gall-bladder. In this case the enlargement could hardly have taken place as a consequence of the blocking up of the common duct by a gall-stone. In the passage of a calculus through the cystic duct to reach the common duct, there would have been, almost certainly, hepatic colic. In this case there had been no symptoms to indicate the passage of a gall-stone. It is probable, indeed, that distension of the gall-bladder results more frequently from thickening of the mucous membrane of the ductus communis and its partial occlusion in that way, while the hepatic and cystic ducts are left free.

The gall-bladder varies in size. In one case, where the subject had been perfectly healthy and a man of large size, I found the gall-bladder of the capacity of only two drachms. In other cases it would have held as many ounces. I have never seen a case of distended gall-bladder which could have been mistaken for hepatic abscess.

DR. MOORE:—The treatment of hepatic colic from gall-stones as laid down by Watson and Stokes, is first to allay pain, secondly, to cause relaxation by nauseants or blood-letting, and thirdly, to produce emesis, so as mechanically to dislodge the gall-stones by the action of the abdominal muscles and diaphragm; but care should be taken to ascertain whether there be any soft fluctuating tumor or impaction of long standing, as a rupture of the duct may be caused by the straining efforts of vomiting.

ANNUAL AND QUARTERLY MEETING OF THE DISTRICT MEDICAL SOCIETY OF NORTHWEST MISSOURI.

The twelfth quarterly and third annual session of the District Medical Society of Northwest Missouri convened at St. Joseph, Mo., April 12, in the County Court Room.

Dr. W. I. Heddens presided; D. F. A. Simmons, of Rochester, and C. R. Woodson, of Agency, Vice Presidents; Dr. Jacob Geiger, Secretary.

The following gentlemen were present : Drs. C. R. Woodson, Agency ; A. Goslin, Oregon ; J. S. McDow, Barnard ; J. M. Hoffman, Whitesville ; J. H. Rogers, Amazonia ; C. W. Spencer, Filmore ; F. A. Simmons, Rochester ; A. Mulnix, Rosendale ; A. Lee, Highland, Kas. ; J. G. Brownlee, Forbes. Visitors : J. W. Heddens, city ; Dr. Stringfellow, city ; Dr. Scott, Andrew County ; Dr. Mitchell, of DeKalb.

From St. Joseph : Drs. W. I. Heddens, Hugh Trevor, T. H. Doyle, Jacob Geiger, J. M. D. France, J. P. Chesney, J. M. Richmond, S. F. Carpenter, J. T. Berghoff, G. C. Catlett, J. B. Howard, C. F. Knight, D. I. Christopher, Wm. B. Craig, J. F. Thorwarth, E. A. Donelan and C. G. Siemens.

The Chair appointed Drs. Donelan, Chesney and Christopher a committee to arrange the programme of business.

They reported as follows : Presentation of certificates to members ; essay, by Dr. Christopher ; voluntary essay, by Dr. Simmons ; discussion of regular question : Alleged Malpractice ; essay by Dr. Goslin ; selection of delegates to State and National societies ; voluntary reports of cases.

For evening session : Election of officers : valedictory of Dr. Heddens ; essays by Drs. Catlett and Stone ; reports of cases ; voluntary oral or written communications.

The report was adopted.

AFTERNOON SESSION.

A motion to change the annual dues from \$1 to \$2 was discussed and lost.

Drs. J. F. Thorwarth, of St. Joseph ; J. G. Brownlee, Forbes ; S. C. Mitchell, of DeKalb County, made applications for membership. The applications were referred to the committee on elections, who reported favorably on Drs. Brownlee and Thorwarth, asking further time to consider the case of Dr. Mitchell. Drs. Thorwarth and Brownlee were then elected members.

The Treasurer, Dr. Doyle, made his annual report, which was referred to a special committee, consisting of Drs. Siemens and Christopher. The committee examined the report and pronounced it correct.

Dr. Christopher read an excellent paper on Purulent Ophthalmia. The paper was received with thanks.

The following gentlemen spoke on the essay : Drs. Woodson, Lee, Goslin and Carpenter.

Dr. Simmons read an exceedingly interesting and scientific essay on Medical Jurisprudence.

Dr. Donelan opened the discussion on Alleged Malpractice, followed by Drs. Spicer, Catlett, Leigh, Carpenter, Heddens and Doyle.

EVENING SESSION.

Dr. Bagby, of Buchanan County, was introduced as a visitor.

An election of officers for the ensuing year was then had, and resulted as follows:

President—Dr. G. C. Catlett.

First Vice President—Dr. Hugh Trevor.

Second Vice-President, Dr. A. Goslin, of Holt County.

Recording Secretary, Dr. Jacob Geiger.

Corresponding Secretary, Dr. D. I. Christopher.

Treasurer, Dr. Doyle.

Librarian, Dr. J. M. Richmond.

Dr. W. I. Heddens, the retiring President, then delivered the valedictory address, in words as follows:

GENTLEMEN OF THE NORTHWEST MISSOURI MEDICAL ASSOCIATION:—Another annual meeting has arrived—another year has been added to the age of this flourishing and prosperous young society. Although but three years old it is already the most important medical association of the Northwest, numbering fifty-two members—representative men—men of the most progressive and intelligent ideas in their respective communities.

The last year has been characterized by more harmony and good-natured work, more scientific discussions, and less irritating debates over laws and ethics than formerly, and I am happy to say to you that each has the very highest regard for another, illustrating the fact that we can differ in debates and be steadfast friends still, for whatever differences of opinions may have prevailed upon scientific subjects and whatever sharp criticisms we may have had, I am sure they have left no sting behind.

There have been a goodly number of real valuable papers, and very able and scholarly criticisms and debates upon them, and other subjects pertaining to practical medicine and surgery. There have also been some pathological specimens and mechanical appliances exhibited.

There is, however, I am sorry to say, a lack of arrangement for future use, both of papers and specimens.

Let me urge on all the members of this society the importance of close and careful observation, and I heartily advise you all to keep a record of your cases in a conscientious manner, of the causes, symptoms and treatment and issue of the case, and honestly report them to this society. We often learn more from failures than successes, for if we know the dangers surrounding us we can the more surely avoid them. I would also advise you to study the causes of diseases in your respective neighborhoods, for sanitary science is now taking high rank in our profession.

Go forward in our noble profession; prepare yourselves thoroughly with such scientific and practical knowledge as your respective locations require, and then honestly and humbly follow the example of the great and good Physician, "go about doing good."

Gentlemen, I thank you for the never-failing kindness and

attention that you have always given me, for I truly appreciate the ever liberal and generous honor which your partiality has so often undeservedly bestowed upon me, and I hope you will show the same liberal courtesy toward my worthy and deserving successor, in whose hands and keeping you have now placed the chief authority of this society.

I now introduce to you your President for the coming year, Dr. Catlett.

The officers elect were then introduced and each one returned thanks.

Dr. Catlett read an elaborate, instructive and exhaustive article on criminal abortion and was heartily thanked by the society.

Dr. Stone, of Lathrop, one of the appointed essayists, was excused.

Dr. Goslin read some instructive notes on rheumatism, as treated successfully by salicylic acid, and the same subject was debated by Drs. Simmons, Craig and Lee.

Dr. Spicer read a short paper on *Viburnum Prunifolium* as an anti-oxytoxic, and remarks on the subject were made by Drs. Goslin and Lee.

The President appointed the following standing committees :

On elections—Drs. Heddens, Siemens and Spicer.

Executive Committee—Drs. Smith, Woodson and Carpenter.

On Publications—Drs. Chesney, Richmond and Craig.

It was ruled that all members desiring to attend the coming conventions of the State Medical Society and American Medical Association, can obtain credentials from the Secretary.

The committee reported the following programme for the next quarterly meeting :

Subject for discussion—Septicæmia.

Essayists—Drs. Knight, Hoffman, Craig and McAdow.

The convention was then declared adjourned until the second Tuesday in July next.

PROCEEDINGS OF THE EVANSVILLE MEDICAL SOCIETY. [Reported for THE JOURNAL by G. B. WALKER, M. D., Sec'y.]

The Society held its regular monthly meeting on the evening of April 1, 1878, at the office of the Secretary.

Dr. J. W. Compton, President, called the meeting to order, and after the reading of the minutes and other preliminary exercises, Dr. Achilles presented to the Society a fœtus, sent to him by Dr. A. Fahrner, of this county, destined for the Museum of our Medical College, together with a letter, describing the particulars of its delivery, and a few comments thereon. Being of some interest to the profession, it was brought to

the notice of the meeting, in connection with Dr. Fahrér's statement. The fœtus was much flattened, and exhibited a development of four and a half or five month's gestation, and was delivered by Dr. Fahrér, in company with another mature and living child. The matured infant weighed 8 pounds, its head being rather larger than usual. While attending to the delivery of the placenta, he discovered the presence of the unmatured fœtus in gestation. This exhibited besides the flattened condition of head and body already referred to, a freshness of the skin, without the least sign of decay, so that it was thought that blood had circulated through the system quite recently; but no pulsation of the heart was perceptible. The flattening had taken place according to the opinion of Dr. Fahrér, during the protracted delivery, and he supposed that the fœtus must have been pressed between the walls of the uterus and the head of the larger child. The mother is 40 years of age, of medium size, and a tolerably well-set, strong woman; her sexual organs normal. She was the mother of seven children, and had previously good deliveries.

The birth of the mature child in this case, according to her computation, occurred at the proper time, and she stated, that she had never felt so well as during her recent pregnancy.

Extra-Fœtation.

Dr. Achilles, remarked showing the specimen: This is the fœtus in question. If it is a child of four and a half months, for which view all the parts speak so clearly, and which according to Dr. Fahrér could not well be disputed, it must have been conceived at a time when the other fœtus had completed about one-half of its intra-uterine existence. In other words, is it a case of superfœtation, or is superfœtation under the circumstances at all possible? Dr. Fahrér, judging from the freshness and general appearance of the fœtus at the time of the delivery, does not believe that it is simply a case of tubal pregnancy, with one normal child, and the other, from some unknown cause, having its development arrested; and, although he considered superfœtation an impossibility on physiological grounds, his opinion in the matter has been completely shaken by the present case, in which he now submits to the consideration and judgment of the profession.

Dr. Compton said, that the case as described, gave more indications of conception, having taken place at the half-term of a previous pregnancy, than any he had seen. The specimen remained as you observe as flat as a man's hand, but if a circulation of blood had been maintained up to within a few moments of delivery, as the freshness and redness of the skin would indicate, and the specimen had recently a rounded shape, the natural elasticity would have caused the rounded shape to return shortly after the removal of the pressure that caused it. If you admit

that superfetation may take place in some unoccupied part of the uterine cavity, that part would most likely be near to, and about the uterine neck, the point probably occupied by the child's head of the first conception, so that the specimen may have been flattened by the pressure during the early months, while the tissues were soft and yielding.

Dr. Day stated that though believing the specimen on exhibition to be nothing more than a twin fetus, the growth and development of which was arrested in the early weeks of its existence, probably by some adverse condition of its umbilical cord or placenta, he thought the medical gentleman who sent it in (Dr. Fahrer) was not assuming an impossibility, in his belief that the specimen is the fruit of a superfetation at five months, though such a phenomenon might not happen once in hundreds of years the world over. When we reflect on some of the conditions admitting of superfetation, we can readily see how it might happen, even at a late date, or during any period of utero-gestation. Of these conditions ovulation and vivification only are required. Who shall say that a woman who menstruates during utero-gestation, instances of which many of us have seen, is not ovulating as certainly as she did in the unimpregnated state? Though in asking this question I do not wish to be asserting a belief that ovulation attends every menstrual epoch. And who shall say that when the natural avenues are open to the passage of the menstrual fluid under these circumstances the spermatozoa cannot ascend? We know that hidden physiological conditions stand abar to such an anomaly in reproduction, just as they stand to abdominal and tubal pregnancy, to the production of plurality of fetuses, or to a mole; still they do not always prevent the irregularity; so, while a superfetation of five months may never have occurred, or even one at a month earlier in pregnancy, so far as the visible conditions go, a superfetation of five months seems as possible as some of the anomalies mentioned.

Dr. G. B. Walker said that the case before the society so nearly resembled a case reported by himself, to the Tri-state Medical Society, and published in the *Chicago Medical Journal and Examiner*, that he would ask the indulgence of the gentlemen present, while he read the report from said journal. After the reading, he stated that he believed the cases were susceptible of a similar explanation and that is, that they were twin conceptions, and that one fetus in each case died about the middle of gestation, or if later, the small size of the child was in consequence of disease of the placenta, or some other cause arresting development, causing a dead and immature fetus to be expelled in company with a mature and living child. Diseased placenta may, in both cases, have interfered so much with the life and growth of the fetus, as to cause atrophy first and death after-

wards; the dead child remaining for weeks or months in the uterus, to be expelled at last in company with the normal child. The suggestion of superfetation would not, all things considered, be as easy an explanation of the case, as that of a twin pregnancy, in which one of the twins had its development checked, and lost its life during gestation. In answer to the inquiry, as to the possibility of superfetation in the middle of pregnancy, Dr. Walker said, unless associated with certain malformations of the reproductive organs, it would seem to be almost an impossibility according to recognized laws, although some reported cases of the kind are not very easily explained. Admitting that it requires a period of from 8 to 15 days for the product of conception to travel from the ovary to the uterus through the tube, it would seem reasonable that a new conception might take place during this period, and even after the ovum had found lodgment in the cavity of the uterus, the male germ might still pass during the first month or two, along the unoccupied wall of this organ, so as to reach the ovary, and thus effect a second impregnation. About the third month, however, and from this time forward, the uterine cavity is so completely occupied, and the cervix plugged up by the amniotic sac, that it would seem to be impossible for the seminal fluid to pass beyond the vagina; hence, a conception, after the first conception had existed, say three months, might be considered impossible. It has been suggested, that some women menstruate during the whole period of pregnancy, and that the continuance of this function indicates the ripening and discharge of an ovule at each period, and it is supposed that if the menstrual fluid, floating an ovule, could pass down, the male sperm could also pass up to meet it. It is true that well authenticated cases of periodical discharges from the genitals, resembling the catamenia, have been observed; but there is little doubt, that such cases generally are threatened abortions, the monthly occurrence of the flow, depending upon the menstrual malimen, which is attended by greater engorgement of the pelvis, followed by hemorrhage from ruptures of some of the vessels connecting the ovum with the uterus. This is more apt to occur in plethoric women, whose vessels are distended, or with those who are feeble and delicate, from the frailty of the union between the fetal envelope and the uterine walls. If it be admitted that true menstruation occurs in some cases throughout gestation, it would be more reasonable to suppose the anomaly of its escape from the cervix or upper portion of the vagina, than from the uterus proper. It does not necessarily follow, however, that every monthly flow from the genitals, even in the absence of pregnancy, is attended by the escape of a female germ. In fact it has been pretty well ascertained, though at variance with the common custom, that menstruation sometimes takes place without the discharge of an ovule, and also, that under strong sexual excitement, an ovule

may escape during the interval of the periods of the discharge.

As to the possibility of a dead fœtus being carried in the uterine cavity for several months, without putrefaction taking place, it is well known that so long as the amniotic sac remains unbroken, and the atmosphere is thereby excluded from access to the fœtus, its putrefaction will seldom occur. In this condition of the ovum, the soft parts of the fœtus are generally dissolved by maceration, in the liquor amnii until nothing remains but the skeleton, with a small portion of adipocire, enclosed in its envelope of skin. Should putrefaction follow rapidly on the loss of life by the fœtus, the woman would frequently be placed in a pitiable condition, from exposure to the local irritation caused by such a state, and of septicæmia from absorption of the poisonous fluid into the mother's system. In extra uterine conceptions, instead of carrying the child for months or years after its death, she would be unable even for a very short period to escape the baneful effects of absorption of the septic fluid from the cavity of her abdomen.

Rheumatism.

In pursuance of appointment made at the last meeting of the Society, Dr. E. B. Walker made an extempore report or statement on the subject of rheumatism. He described rheumatism as an anomalous disease, being an inflammation of certain tissues without some of the usual signs of inflammation, and without a tendency to suppuration, although in exceptional cases suppuration may result. It appeared to be the manifestation of hereditary predisposition in many cases, and frequently commences its attack as a painful arthritis, extending gradually from the joints to the nerves and muscles, in immediate anatomical relation thereto. It may be complicated with, or mistaken for neuralgia, gout, tertiary syphilis, or even phlegmonous inflammation. It may implicate the synovial membranes and dense ligaments about the joints, resulting in permanent damage to their functions. Its tendency to metastasis is a strange peculiarity, and at variance with the common laws regulating inflammations. Alkaline treatment has had perhaps more advocates in former times than any other, while the acid treatment has also had many friends. They were both aimed, however, at the same mark, namely: To remove some toxic matter from the blood, supposed to be left there by failure of the kidneys to perform their duty faithfully. When, however, the result of these plans of treatment has been compared to that without any specific treatment whatever, the difference is so equivocal as to lead to doubts as to any great benefits being derived from them. Within the last four years, however, the treatment by salicylic acid has secured the confidence of the profession to a greater extent than that by any previous remedy. He (Dr. W.) had used the article pretty freely and taken it himself with increasing confidence in its curative value. It must be taken, however, in *sufficient quan-*

tity to secure its beneficial effects, and this may be, when not contra indicated by disorder of the stomach or bowels, to the extent of from $\bar{5}$ ss to $\bar{5}$ j, especially in acute rheumatism. Salicine has been also used, but has not given satisfaction equal to the salicylic acid. Should this article maintain the credit already awarded it, it will prove a valuable addition to the *materia medica*.

Dr. Day:—Some one has said 12 days in bed cures rheumatism; there is some truth in this. Quite as much perhaps as that any one of the many remedies that have been used cures it. He had long since ceased to look for a specific for rheumatism; indeed he was convinced that many different pathological conditions are included under this appellation. Should we not suspect as much when acids, alkalies, and other remedies and means antagonistic in action, are equally followed by success and failure? The belief in a specific for this disease implies a *materies morbi, sui generis*, which idea he thinks ought now to be pigeon-holed. In cases of acute rheumatism—if there be no contra-indicatory circumstances—he gives a full dose of calomel to be purged off freely. The patient must be confined to bed and put under a diaphoretic and diuretic course. In chronic rheumatism he aims at once to change the habits and hygiene of the patient.

Dr. Compton said he had no doubt of the therapeutic value of salicylic acid in the treatment of inflammatory rheumatism; but the continued administration of this remedy was attended with so much danger to the life of the patient, just at the time we become ready to endorse and applaud its almost miraculous control over the disease, that he had been deterred from prescribing it indiscriminately or even very often. He recited the report of a number of cases which had proved suddenly fatal soon after the remedy had cured the disease. Three cases are reported by Dr. Charles H. Hall, of Macon, Ga., in the *Medical and Surgical Reporter* of January 19, 1878. "One, a woman 20 years of age; prescribed five grs. salicylic acid every two hours; nothing else. Continued this treatment seven days; each day brought additional improvement; no pain in the region of the heart; sounds natural. The cure on the seventh day seemed nearly complete and marvelous. Was called at daylight the eighth day (only 200 yards to go); found her dead." The second case, "a boy 17 years of age, took five gr. doses every two hours. On the 5th day patient suffered much pain and difficulty of breathing; cardiac symptoms all aggravated; I stopped the acid and gave alkalies; good recovery; believe if the acid had been continued he also would have died." The third case had been sick several weeks with acute articular rheumatism; had taken largely of salicine daily; "found him with great pain in the cardiac region, and difficulty of breathing. Anodynes relieved

him; salicine suspended; no further trouble." Dr. Empis (Bull. General Therapeutics), reports a case of acute articular rheumatism; "patient took 10 gr. doses of salicylic acid every two hours. Within 24 hours decided relief of all the symptoms, but complained of deafness and tinnitus aurum; $\frac{7}{8}$ grs. salicylic acid every two hours; on the third day all treatment was suspended, and the success of the salicylic acid treatment was remarkable. After a restless night he fell back unconscious, inspiration at longer and shorter intervals; the heart ceased to beat and the patient was dead." Dr. Empis is very positive in his belief that either salicylic acid or metastasis was the cause of death. It was his opinion that the number of deaths reported from salicylic acid was greater than those from chloroform. Dr. Compton had usually had such good results from the use of alkaline diuretics and anodyne diaphoretics, together with an equable temperature of the body, he felt disposed to adhere to their administration, as constituting a treatment both safe and reliable.

Dr. Ross stated that he held the view that it is generally admitted that acute rheumatism is produced by an acid in the blood. He has examined the excretions of a great many cases, and in every one found an acid condition. He treats rheumatism by controlling the circulation with arterial sedative, verat. viride and large doses of sulph. quinia, or sulph. cinchonidia; has no choice between the two last named remedies. He believes there is no remedy equal to the cinchona alkaloids, to neutralize and eliminate the peculiar acid from the system. He also uses alkalis at stated periods, until the excretions become alkaline; has used salicylic acid in a number of cases, but was disappointed in its action.

Dr. Edwin Walker said that in the use of salicylic acid, or any other remedy, he deemed it of the greatest importance first, to make a correct diagnosis. He had met with a case of tertiary syphilis, that had been treated with salicylic acid. He believed the remedy to be useful only in acute rheumatism, while chronic rheumatism was little, if any affected by it. His results in all purely acute cases were good, except in one case in which the disease was not materially shortened. He preferred salicylate of soda to the pure acid.

Dr. Achilles said, concerning the treatment of the various forms of rheumatism, it would seem to him that the value of salicylic acid has been over estimated, and that its employment is too recent to draw positive conclusions as to its neutralizing power in a disease, the tendency of which with reasonable care as to the general health, often points to a favorable termination, even under the use of the most opposite medicinal agents, or without any medical treatment whatever. He considers this disease as having its cause in a disturbance, more or less extensive

of certain secretions, causing an alteration of the animal fluids, especially the blood in which fibrin, for example, is largely in excess; the urine deposits, on standing, are usually a reddish precipitate of lactates and lithates, while the perspiration exhibits an acid odor and reaction. His views as to treatment nearly coincide with those expressed by Dr. Compton, namely: alkaline diuretics and diaphoretics, combined with squills or colchicum, especially the former, after gentle depletion with calomel, and maintaining the bowels in a soluble condition; to this, under particular circumstances, he adds mild vesication, and whenever applicable the vapor bath, either local or general. With regard to the preference given by Dr. Edwin Walker, to the salicylate of soda, he is inclined to believe that the metallic radical, the alkali, mainly receives the credit, perhaps too readily given to its acid ally, in that combination.

Dr. E. B. Walker expressed himself much gratified by the discussion that had arisen on the subject of rheumatism. Perhaps he ought to have added in his first remarks that he considered a judicious use of calomel and opium valuable in acute rheumatism, and a free course of diuretics and diaphoretics in chronic rheumatism. And to secure the desired effect on the skin and kidneys, no better remedy could be devised than the almost absolute comp. decoe. of sarsaparilla. Copious draughts of this decoction, he believed to be especially valuable in eliminating the poison from the system, of which rheumatism is the sign.

Medical News Items.

MISSOURI STATE UNIVERSITY MEDICAL SCHOOL.—Examinations begin last Tuesday (28th) of May. Committee of Examiners: John W. Trader, M. D., Sedalia; J. W. Pryor, M. D., Palmyra; William Bryant, Savannah; and G. W. Broome, M. D., Moberly. Address before the school, by Prof. P. Gervais Robinson, M. D., of St. Louis; Valedictory of Class and Delivery of Diplomas, Monday evening, June 3rd. Next session will open the first Monday in October, 1878. S. S. LAWS, President.

DR. GEO. M. BEARD, of New York, has sent a circular of inquiry to sufferers from "writer's cramp." He is desirous of obtaining as many facts as possible relating to the symptoms and history of this disease.

Clinical Reports from Private Practice.

CONTINUATION OF THE HISTORY OF THE CASE REPORTED ON PAGE 309 OF THE APRIL NO. OF THE JOURNAL. By EDW. BORCK, M. D., of St. Louis.

April 4th.—Saw patient for the last time with the family physician. She was able to sit up in bed; pulse, respiration, temperature and secretions, normal; ordered a dose of quinine of gr. v, to be taken every day for a few days. Nurse discharged.

Her husband informed me, on the 11th of April, that she had been walking in the garden for two days.

The family physician writes me, on April 20th, as follows: "Saw Mrs. Bodeman April 6th; she was in every respects doing well. April 15th found her working in her garden; says she feels now like one having new life."

From the above report it will be seen that the patient made a quick and uninterrupted recovery, being able to walk about on the twenty-first day after the operation.

I may, in addition, state that I have subjected the fluid again to examination. The reaction was alkaline; the degenerated tissue was perhaps fatty degenerated epithelial cells; but I could not find a single distinct epithelial, nor pus cell.

Errata in the last number:—Read that the incision was made from the umbilicus to within one and one-half inches of the pubis.

DR. BANE'S CASES OF OVARIOTOMY.

EDITORS JOURNAL:

Yours of the 14th at hand. The two patients upon whom I operated for ovariectomy, reported in the March number of your JOURNAL, are doing well; their recovery is complete. Hannah Peterson is doing my housework now, and Kate Vogle walked in eight miles from the country to look for a situation day before yesterday.

Yours truly,

St. JOSEPH, Mo., April 18, 1878.

A. V. BANES

Editorial.

DELEGATES TO MEDICAL MEETINGS.

No barnacle of the Medical Profession should be appointed a delegate to any of the Medical Meetings that are to be held this spring. It is frequently noticed, that about the time of the appointment of delegates, individuals who have neither contributed to the advancement of the profession, nor even attended their local society meetings, begin to show themselves at the society meetings, and slyly work for an appointment, for the sake of the notoriety connected with the office. No Medical Society can afford to appoint such individuals. No one should be appointed who has not resolved to attend the meetings for which he is delegated unless prevented by unforeseen circumstances.

Our State Association, which meets on the 21st of this month, should be attended by full delegations from every County and District Society in the State. There should be enough of ably written papers read to make a book of 300 to 400 pages. To allow this amount of work to be done in three days, the Association should meet in the afternoon and evening of each day, in sections, as in done in the American Medical Association. In this way a vast amount of work can be done in a short time. The meeting in general assembly for three forenoons will give ample opportunity for hearing the report of the Chairman of the different sections. Six or seven papers can be read in this time.

THE WARREN PRIZE.

We are glad to give place to the following announcement of the Warren triennial prize, addressed to the Editors:

The Warren prize committee, consisting of the visiting physicians and surgeons of the Massachusetts General Hospital, have awarded the prize of the present year, amounting to \$371.41, to E. O. Shakspeare, M. D., of Philadelphia, for an essay *On the Healing of Arteries after Ligation*.

The committee also announce that the subject for 1880 will be *Original Observations in Physiology, Surgery, and Pathological Anatomy*.

Essays should be forwarded to the resident physician, Massa-

chusetts General Hospital, Boston, on or before February 1, 1880. The amount of the prize will be \$400.

Your obedient servant,

R. M. HODGES.

Sec'y. Physicians and Surgeons of the Mass. Gen. Hospital.
November 13, 1877.

The conditions of the prize lately awarded were similar to those given in the announcement, the object, we understand, being to stimulate original researches. As evidence of the success of the plan to leave to the competitors the choice of a subject within certain limits, it may be mentioned that the number of essays presented was large. We learn that a dissertation on Pneumono-Dynamics and one On Certain Points on the Physiology of the Nervous System were highly praised by the committee for their merit. A third, On Bone, was much admired for the superb illustrations which accompanied it and the great labor which its preparation evinced, particularly that portion devoted to Dentine.

The success of the committee in thus bringing out work of a high standard from original investigators is a subject for congratulation. This is but the second award which has thus far been made, and the reputation of the prize, if we may use the term, may be said already to be established. We are happy to hear that essays were sent from distant portions of the country, and it is rumored that one came across the Atlantic. Both prizes hitherto awarded have been captured by Philadelphia. While hoping that the participation in the contest for the coming prize may be general, we should be glad to see it carried off by one of our fellow citizens, and thus justify the reputation which our city possesses for "higher medical education." We trust, at all events, that many may thus be stimulated to contribute to the cause of medical science.

Meetings of Medical Societies.

AMERICAN MEDICAL ASSOCIATION.

The Twenty-ninth Annual Session will be held in the city of Buffalo, N. Y., on Tuesday, Wednesday, Thursday, and Friday, June 4, 5, 6, and 7, 1878, commencing on Tuesday at 11 A. M.

"The delegates shall receive their appointment from perma-

nently organized State Medical Societies, and such County and District Medical Societies as are recognized by *representation in their respective State Societies*, and from the Medical Department of the Army and Navy of the United States."

"Each State, County, and District Medical Society entitled to representation shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number: *Provided*, however, that the number of delegates for any particular State, territory, county, city or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association."

Secretaries of Medical Societies as above designated are earnestly requested to forward, *at once*, lists of their delegates.

Will you kindly send to the undersigned a list of your members with their residences, in order that a correct record may be made of all who are in affiliation with this body?

SECTIONS.

"The Chairmen of the several sections shall prepare and read in the general sessions of the Association, papers on the advances and discoveries of the past year in the branches of science included in their respective sections. * * *"—By-Laws, Art. II., Sect. 4.

Practice of Medicine, Materia Medica, and Physiology: Dr. A. L. Loomis, New York, Chairman; Dr. J. H. Etheridge, Chicago, Ill., Secretary.

Committee appointed to report to this Section: On Clinical and Meteorological Records: Dr. N. S. Davis, Illinois, Chairman.

Obstetrics and Diseases of Women and Children: Dr. E. W. Jenks, Detroit, Mich., Chairman; Dr. H. O. Marcy, Cambridge, Mass., Secretary.

Surgery and Anatomy: Dr. Henry H. Smith, Philadelphia, Pa., Chairman; Dr. E. T. Easley, Little Rock, Ark., Secretary.

Medical Jurisprudence, Chemistry, and Psychology: Dr. Walter Kempster, Oshkosh, Wis., Chairman; Dr. E. A. Hildreth, Wheeling, W. Va., Secretary.

State Medicine and Public Hygiene: Dr. J. L. Cabell, University of Va., Chairman; Dr. E. J. Marsh, Paterson, N. J., Secretary.

The following committees are expected to report:

On Prize Essays: Dr. E. M. Moore, Buffalo, N. Y., Chairman.

On Necrology: Dr. J. M. Toner, Washington, D. C., Chairman.

On Catalogue of National Library: Dr. H. C. Wood, Pa., Chairman.

On Recommendations in President Bowditch's Address: Dr. N. S. Davis, Illinois, Chairman.

It is probable that several railroads will carry delegates to Buffalo and return for one and one-third fare. Such roads as agree so to do will be announced in the Journals.

PHILADELPHIA, 1400 Pine St.

WM. B. ATKINSON, M.D.,
Permanent Sec'y.

THE MEDICAL ASSOCIATION OF THE STATE OF MISSOURI.

The time appointed for the meeting of the State Association has been changed to Tuesday, May 21st, in order that it may not conflict with the meeting of the American Medical Association. Members of the profession desirous of attending both conventions can now do so.

At the last meeting, held in Kansas City, an invitation was extended to the State Association, by the Board of Directors of the Sweet Springs Company, to hold its next annual session at Sweet Springs, and to be the guest of said company while in convention. This invitation was accepted with a vote of thanks.

The Springs are in Saline Co., one mile from Brownsville, a station on the Lexington and Sedalia railroad, easily accessible from all directions.

It is expected that the railroads will make the usual reduction in rates, commuting to one-fifth return fare to members.

A. J. STEELE, Rec. Sec'y.

Biographical.

CLAUDE BERNARD. [Translated from *Le Progres Medical* of Feb. 16, 1878, by S. POLLAK, M. D., of St. Louis.]

[Continued from last month.]

Claude Bérnard has successively investigated all the points of of physiology and biology; first the *gastric juice* which was mentioned in one of his first publications; soon followed the *saliva*, the *intestinal juices*, the action of the nerves upon *digestion*, *respiration* and *circulation*; later the function of the pancreas, which he demonstrated in 1849 in a memoir which brought him the great prize of physiology. He obtained the same high distinction for the four following years, from 1851 to 1853. 1849 is the date of his great discovery of the *glycogenic function* of the liver, and the still more surprising discovery of the *artificial*

reproduction of diabetes by the puncture of the walls of the fourth ventricle. This experiment was frequently repeated. To the numerous contradictions, he presented innumerable and victorious experiments, eliminating every error from his opponents theories, and established a physiological truth, which is admitted to-day by the larger majority of savans.

To discover the function of all of the glands of the intestines, to find the glycogenic function of the liver, to demonstrate its origin would be enough to make a physiologist as celebrated as Flourens or Magendie. Claude Bernard was indefatigable in the search of facts; it is thus that in repeating the works of Pourfour du Petit upon the great sympathetic, that he arrived at the discovery of the *vaso-motors*, a starting point from which the researches and fruitful applications commenced to be appreciated in pathology; let us quote the page upon which he gives an account of this fundamental discovery; it is the best way to make one comprehend how he deduced from experimental fact, the consequences unknown to his predecessors.

“* * * I made a section of the great sympathetic in the neck of a rabbit, in order to prove my hypothesis and to see what the relative effect would be upon the calorification of that side of the head where the nerve is distributed. I was led, as one may suppose, relying upon the prevailing theories of my predecessors to the hypothesis, that the temperature would be lowered by the section of the sympathetic nerve, * * * but just exactly the opposite result was reached. Then I did as I always do, abandoned my previous hypothesis, in order to observe and to study the fact for the purpose of determining as exactly as possible the true conditions by experiments * * *.”

Claude Bernard soon studied the principal nerves examined the experiments of Bell, Flourens, Magendie, and brought into the delicate study of physiology of the nervous system, that clearness and sureness of experiments, which have so much contributed, to replace by positive facts, the vague ideas of ancient physiologists of every phenomena. By his researches upon the nervous centers, he was led to occupy himself at the same time with toxicology; hence new experiments and a new book treating of *oxide of carbon*, of *curara*, of *strychnine*, of *nicotine*, *ether* and *alcohol*. Curara, in spite of its scarcity, became one the best known poisons, and fortunately for science, one of the most precious in the laboratory.

In 1857 Claude Bernard published his work on the *physiological properties and pathological alterations of the liquids in the human body*, this again formed the new basis for new experiments. The present tendency to analysis of organic liquid was inspired by the reading of this work, and by rules and methods taught therein; they were the same he expressed in his lectures in the College of France; they were further developed in his still later work.

Since that period he published several essays on subjects brought up in the course of his lectures, especially on anaesthesia and on calorification.

We don't venture to enter into the details of his works, which the world possesses and admires. We will content ourselves to remark, that in his lectures, he prefers that actual experiments should prevail, he bows to proven facts, which he is constantly seeking. He discarded all theories, disclaimed all authoritative ideas, unless established by experiments. He said his lectures shall be outside of a preconceived system, his only object was to keep science in the road of progress, and emulate young inquiring savans to make experiments, and never accept the teaching of any dogma without proof. "He modestly speaks of his works" they are simple narrative of what is going on in the interior of the laboratory and in the amphitheatre of a physiologist who works and discusses science, and this is the saying of a man, who has made more discoveries than any of his predecessors, who lectured a greater number of years, who has written six distinct works on physiology; a treatise on *operative medicine* and many memoirs which he presented to many scientific bodies.

Besides their scientific value, besides the precise facts which they furnish to pathology, the works of Claude Bernard have a great philosophical importance; they demonstrate how much science can elevate itself, to what great results it may legitimately pretend, when it frees itself of the narrow bounds of dogmatism or tradition. Science can only rest upon the results of frequently reported experiments. Applied to physiology, it is emphatically Claude Bernard's own; but in general, it is that of Bacon, of Descartes, of those minds, who admit nothing as true, that cannot be demonstrated.

It is by his synthetical conception of the nature of tissues and their biological properties, that Claude Bernard elevated himself to the rank of philosopher, in his "Introduction to the Study of Experimental Medicine."

His works bear throughout a literary stamp; it is this which opened the door of the Academy of France to him in 1868. But it was not until 1869, in his great reception speech, that he enlarged upon the great importance of making experiments.

The loss which physiology suffers, which medicine deploras, and over which France weeps, is irreparable. Struck down in the midst of his work, without time to arrange or review the immense material which he desired to consecrate to his work on general physiology, Claude Bernard died as a savant in the breach, in full scientific activity, in full possession of his great intellect. It is this great loss to science, that caused universal mourning, and an outburst of sympathy from all nations.

The legislative assembly of France have in accordance with the public desire, resolved to take charge of the obsequies of

this great savant, who done so much to make his country illustrious.

To us physicians and men of science this loss is even more sensible. He, who died, was he not our master, the most authoritative representative? Did he not acquire immortality while living? Was he not the physiologist par excellence? The honest and capable experimentalist, who opposed to speculative theories, the results of most positive researches? Claude Bernard the indisputable savant, shall he not occupy in this century, the place which Haller, Lavoisier have conquered in the preceding century?

Claude Bernard is not entirely dead. His last works are wanting yet. In his early teaching lies the germ of an abundant harvest. Let us imitate his naïve perspicuity, let us follow his rules of precise observation; this would be the best manner of honoring the memory of the man, who bore within himself the genius of physiology, and who according to the sayings of a distinguished statesman, was a luminary which can never become extinct.

Book Notices and Reviews.

THE ADVANTAGES AND ACCIDENTS OF ARTIFICIAL ANÆSTHESIA, being a Manual of Anæsthetic Agents, and their Modes of Administration, considering their Relative Risks, Tests of Purity, Treatment of Asphyxia, Spasm of the Glottis, Syncope, etc. By LAURENCE TURNBULL, M. D., PH.G., Fellow of the American Association for the Advancement of Science; formerly Lecturer on Chemistry applied to the Arts, Franklin Institute; Aural Surgeon to Jefferson College Hospital; Vice President of the Medical Society of the State of Pennsylvania. Twenty-five illustrations. Lindsay & Blakiston, Philadelphia, 1878.

This little work of 210 pages should be on the table of every practitioner who expects to administer an anæsthetic of any kind. We have carefully examined it and cordially recommend it to the profession. It supplies a want in the medical library, and this want will be the more easily recognized after the book is even casually examined.

The object of this work may be stated to be:—

First. To give in as concise a manner as possible a description of the most available agents that may be successfully and safely employed as anæsthetics.

Second. To present the chief chemical tests of the purity of

each substance considered, with its composition, physical characters, and medical properties.

Third. To exhibit the best methods of administering the various anæsthetics, to give careful directions, and to state the precautions to be taken to avoid risk to the life of the patient.

Fourth. To note the personal experience of the author, his assistants and friends, with the various forms of anæsthetics and inhalers in use, with a selection of the most approved of them; not withholding, however, the objections and experiments of other reliable investigators.

Fifth. To compare the relative mortality from all the anæsthetics now employed, endeavoring to assist the reader in forming a fair and candid opinion on this most important subject, which is now and has for so long a period occupied the attention of the public as well as of the medical profession.

THE SOURCE OF MUSCULAR POWER. By AUSTIN FLINT, JR., M.D. D. Appleton & Co., Publishers, 549 and 551 Broadway, New York.

The author sees a little more in the forces and functions of the living organism than the equivalent of the force locked up in the food. The organism is more than, and quite different from, a chemical laboratory, and its forces than the correlates of those of the physical world. While there is a vital chemistry that takes part in the changes which the vital elements of the body undergo in the operation of its functions, there is also a vital or living power that has something to do in the production of such phenomena as muscular power. C.

THE TRANSACTIONS OF THE INTERNATIONAL MEDICAL CONGRESS FOR 1876. Edited for the Congress by JOHN ASHHURST, JR., A.M., M.D. Contains 1,050 pages and completely indexed.

This Congress was beyond all comparison the most important body of medical men ever assembled on this continent, and the papers presented were all the best that could have been offered, and the gentlemen chosen to prepare them were the best men in the profession.

The most wonderful and clockwork like harmony prevailed throughout the week's proceedings, and the amount of effective labor done by the Congress must have been seen or must be examined in the volume before us to be appreciated.

The address on Medicine and Medical Progress in the United States, was delivered by Dr. Austin Flint; that on Hygiene, by Dr. Henry J. Bowditch; on Medical Chemistry and Toxicology, by Prof. Theo. G. Wormley, of Columbus, Ohio; on Surgery, by the late Dr. Paul F. Eve, of Nashville; on Medical Biography, by Dr. Tonor, of Washington; on Obstetrics, by Theophilus Parvin, of Ind.; on Medical Jurisprudence, by Stanford E. Chaille, of Louisiana; on Mental Hygiene, by Dr. Wm. P

Gray, of Utica, New York; on Medical Literature, by the late L. P. Yandell, of Louisville; on Medical Education, by N. S. Davis, of Chicago; on the Medical Staff of the U. S. Army, by Surgeon J. J. Woodward.

The Congress was presided over by the venerable Dr. Samuel Gross, who delivered the welcome address, and at the head of each section was placed, in every instance, men of high attainments and repute.

The meeting of this distinguished body will be long remembered in the land, and its work will never perish.

ATLAS OF SKIN DISEASES. By LOUIS A. DUHRING, M. D., Professor of Skin Diseases in the Hospital of the University of Pennsylvania, etc. Part III. J. B. Lippincott & Co., Publishers, Philadelphia. Price \$2.50 per part.

Part III is fully equal in value to the previously published parts. Without hesitation we commend this work to the profession.

REPORT OF ONE HUNDRED CASES OF DISEASES OF THE EAR. By J. J. KIRK DUNCANSON, M. D., C. M., F. R. C. P. EDIN. (Reprinted from the *Edinburgh Medical Journal* for March, 1878.) Edinburgh—Oliver & Boyd, Tweeddale Court, 1878.

A very instructive monogram; one that will repay the general, as well as the special practitioner.

HANDBOOK OF OPHTHALMOLOGY. By PROF. C. SCHWEIGGER, of Berlin. Translated from the 3d German Edition by Porter Farley, M. D., of Rochester, N. Y. With diagnosis and other illustrations, pp. 555. Publishers, J. B. Lippincott & Co., Philadelphia, 1878.

This work is divided into three parts: The *first* treats of Anomalies of Refraction and Accommodation, Spectacles, Ophthalmoscopes and Ophthalmometer, and Anomalies of the Ocular Muscles. The *second*: Diseases of the Orbit, Lachrymal Apparatus, Lids, Conjunctiva, Cornea, Sclera, Iris, Lens and Vitreous Body. The *third*: Normal Fundus, Diseases of the Choroid, of the Retina, and of the Optic Nerve, Glaucoma and Ambliopia.

The work of the translation is well done. It is a valuable book for the Specialist.

PATHOLOGICAL REPORT OF THE MONTREAL GENERAL HOSPITAL. For the year ending May 1st, 1877, by WM. OSLER, M. D., of McGill University. Vol. I, Dawson Bros., Publishers, Montreal, 1878.

This work of 97 pages is a credit to the author. It shows care in the report of the cases, and research of recent literature concerning similar cases.

Books and Pamphlets Received.

The Vest-pocket Anatomist. (Founded upon "Gray.") By C. HENRI LEONARD, A. M., M. D. 2d enlarged edition. Detroit, 1878.

Suggestions in the Treatment of Spinal Diseases and Curvature. By E. H. COOVER, M. D., of Harrisburg, Pa. [Reprinted from the *Medical and Surgical Reporter* of April 13, 1878.]

Transactions of the American Dermatological Association with the President's Address at the First Meeting held at Niagara, September 4th, 5th and 6th, 1877. G. P. Putnam's Sons, New York, 1878.

Suspension as a Means of Treating Spinal Distortions. By BENJAMIN LEE, A. M., M. D., of Philadelphia. [Extracted from the Transactions of the American Medical Association. 1877.]

Fourteenth Annual Report of the Alumni Association, with the Exercises of the Forty-seventh Commencement of the Philadelphia College of Pharmacy. Phila., 1878.

Annual Announcement of Lectures at Toland Hall, Medical Department of the University of California, San Francisco, Cal. Session of 1878.

Observations in Practice of Surgery, Gynaecology, and Especially Obstetrics. By GEO. B. WALKER, M. D. Read before the Indiana, Illinois and Kentucky Tri-state Medical Society in Evansville, October 17, 1877. [Reprinted from the *Chicago Medical Journal and Examiner*, Feb. and March, 1878.]

Medicinal Plants Indigenous in Michigan. By A. B. LYONS, M. D. [Reprinted from the *Detroit Lancet*, February and March, 1878.]

The Etiology of Intemperance. By CHAS. W. EARLE, M. D., Chicago. A supplement to the Physician's Seventh Annual Report to the Officers of the Institution.

Carbolic Acid Injections in the Treatment of Piles—Radical Cures. By A. B. COOK, A. M., M. D. (From the *American Medical Bi-Weekly* of February 16, 1878.) Louisville.

Scarlatina in Chicago. (Particularly the Epidemic of 1876-77.) By CHARLES W. EARLE, M. D.

Proceedings of the Louisiana State Medical Association, the Constitution and By-Laws, (Provisionally adopted), Code of Ethics of the American Medical Association, and Ordinances relating thereto. New Orleans, 1878.

METEOROLOGICAL OBSERVATIONS.

By A. WISLIZENUS, M. D.

The following observations of daily temperature in St. Louis are made with a MAXIMUM and MINIMUM thermometer (of Green, N. Y.). The daily minimum occurs generally in the night, the maximum at p. m. The monthly mean of the daily minima and maxima added and divided by 2, gives quite a reliable mean of the monthly temperature.

THERMOMETER, FAHRENHEIT—MARCH, 1878.

Day of Month.	Minimum	Maximum.	Day of Month.	Minimum.	Maximum
1	40.0	62.5	18	41.0	54.0
2	48.0	54.0	19	43.0	67.0
3	40.0	42.5	20	50.0	68.5
4	34.5	47.0	21	51.0	77.5
5	38.5	65.5	22	49.0	70.5
6	50.5	68.5	23	51.5	78.0
7	48.5	70.5	24	46.5	60.0
8	60.5	72.5	25	37.0	58.0
9	61.0	68.0	26	41.5	75.5
10	53.5	67.0	27	69.0	76.0
11	47.5	69.0	28	41.5	45.0
12	49.5	71.0	29	35.5	52.0
13	44.0	61.5	30	44.5	62.0
14	41.5	59.0	31	41.0	52.0
15	43.0	66.5	Means	46.0	62.7
16	48.5	60.5	Monthly Mean	54.3	
17	41.0	53.0			

Quantity of rain, 2.54 inches.

MORTALITY REPORT.—CITY OF ST. LOUIS.

FROM MARCH 17, 1878, TO APRIL 13, 1878, INCLUSIVE.

Small-Pox	1	Inanition, Want of Breast Milk, etc.	23	Meningitis and Encephalitis	10	Premature and Preterm Birth	5
Measles	1	Alcoholism	4	Convulsions	25	Surgical Operations	8
Syphilis, Cong'al.	3	Rheumatism and Gout	1	Direct Effect of Solar Heat	5	Deaths by Suicide	8
Scarlatina	3	Cancer	5	Apoplexy	6	Deaths by Accident	5
Erysipelas	5	Phthisis Pulmon.	57	All Diseases of the Brain and Nervous System	26	Total Deaths from all Causes	362
Diphtheria	5	Bronchitis	16	Cirrhosis of Liver and Hepatitis	13	Total Zymotic Diseases	94
Membranous Croup	2	Pleuritis	16	Enteritis, Gastroenteritis, and Gastritis	14	Total Constitutional Diseases	82
Whooping Cough	8	Empyema	2	Enteritis, Peritonitis, and Gastritis	14	Total Local Diseases	106
Typhus Fever	1	Pneumonia	59	Bright's Disease and Nephritis	4	Total Developmental Diseases	7
Typhoid Fever	4	Heart Diseases	10	Cyanosis and Atelectasis	2	Deaths by Violence	13
Cerebro-Spinal Fe.	2	Anemia	10				
Remittent, Intermittent, Typho-Malarial, Congestive and Simple Continued Fevers	17	Marasmus—Tabes Mesenterica and Scrofula	14				
Puerperal Diseases	7	Hydrocephalus and Tubercular Meningitis	5				
Diarrhoeal	8						

CHAS. W. FRANCIS, Health Commissioner.

COMPARATIVE MORTALITY RATES.

CITIES.	Estimated Population, July 1, 1878.	Total Mortality for four weeks, ending Apr. 13, 1878.	Annual Death Rate per 1000 for the four weeks.
New York	1,093,171	2,115	25.15
Philadelphia	876,118	1,190	12.65
Brooklyn	549,438	770	18.22
St. Louis	500,000*	392	9.11
Chicago	460,000	458	12.94
Boston	375,476	542	18.76

*Estimated population, May 1, 1877, 501,489

NEW REMEDIES.

☞ Your Special Attention is Called to the Note Below.

QUININE FLOWER.—Used in the South during the late war, to some extent, as a substitute for quinine, and now introduced to the profession by us.

YERBA REUMA.—From the Pacific slope, now introduced by us. Used in diseases of the mucous passages, especially in catarrh, acute and chronic, leucorrhœa, gonorrhœa and dysentery.

KAVA KAVA.—From the Sandwich Islands. First introduced by us. An efficient and agreeable remedy in gonorrhœa, gleet, gout and rheumatism.

CASCARA SAGRADO.—Introduced by us. It has long been regarded by the residents of the Pacific coast as a sovereign remedy for habitual constipation and dyspepsia.

COTO BARK.—From Bolivia. First introduced by us. It is said to be almost a specific against diarrhœa in its various modifications.

COCA LEAVES.—A powerful nervous excitant, giving great vigor to the muscular system and sustaining the human frame under extreme physical exertion and fatigue.

PARAGUAY TEA.—Largely used in South America as a stimulant to sustain the system when undergoing hunger, or great fatigue during the summer heats.

GRINDELIA ROBUSTA.—From the Pacific Slope. Since this drug was first introduced by us, it has earned for itself a reputation for almost specific curative action in asthma. **NOTE.**—There are several false varieties of this plant, which are offered as genuine. Physicians will readily perceive the difference in the taste of the fluid extract, as compared with our preparation of the true plant.

GUACO LEAVES.—This valuable remedy was also first introduced by us. Its use is indicated in cholera, diarrhœa, chronic rheumatism, etc.

BERBERIS AQUIFOLIUM.—A new California drug, now introduced by us, possessing extraordinary powers as a combined alterative and tonic, and valuable in syphilitic and scrofulous diseases, salt rheum, etc.

BOLDO LEAVES.—First introduced by us. The new South American tonic. In France it has been employed in cases where quinine could not be tolerated.

ARECA NUTS.—First introduced by us. From India. Strongly astringent. Used by Dr. Morris, of England, in the removal of tape worm.

GRINDELIA SQUARROSA.—From California. First introduced by us. An excellent and efficient remedy in malarial diseases, enlarged spleen, etc.

YERBA SANTA.—From northern California. First introduced by us. This drug is a standard remedy in the Western States in bronchial and laryngeal disorders.

FUCUS VESICULOSUS.—First introduced by us. An anti-lat remedy of great merit. No derangement of the stomach or general system seems to result from its use.

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GUARANA,
BAEL FRUIT
BUCKEYE BARK,
URTICA DIOICA
SOAP TREE BARK
SANDAL WOOD,
PULSATILLA,
SUNDEW.

USTILAGOMADIS,
MAGNOLIA FLOWERS,
ALANTHUS GLANDULOSA,
FIVE-FLOWERED GENTIAN,
NIGHT-BLOOMING CEREUS,
GRINDELIA COMPOUND,
XANTHUM SPINOSUM,
WATER FENNEL SEED,
POMEGRANATE BARK,
EVENING PRIMROSE.

DAMIANA,
BEARSFOOT,
BROOMTOP,
COUGH GRASS,
CASTOR LEAVES,
PARSLEY SEED,
ARBOR VITÆ,
CHIRETTA,
KAMALA.

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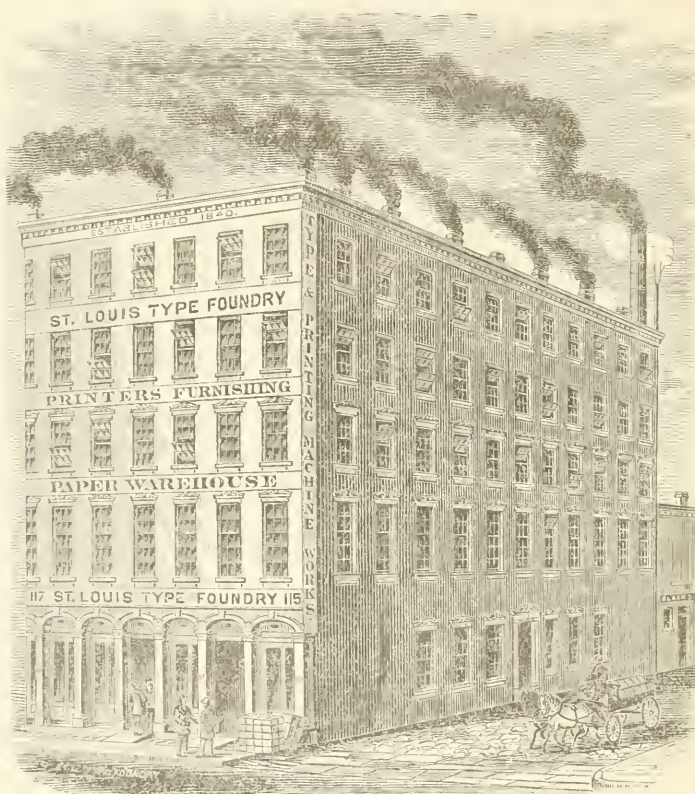
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BELLEVUE HOSPITAL MEDICAL COLLEGE.

City of New York.

SESSIONS OF 1877-'78.

The Collegiate Year in this Institution embraces a preliminary Autumnal Term, the Regular Winter Session, and a Spring Session.

The Preliminary Autumnal Term for 1877-1878 will open on Wednesday, September 19, 1877, and continue until the opening of the Regular Session. During this term, instruction, consisting of didactic lectures on special subjects and daily clinical lectures, will be given, as heretofore, by the entire Faculty. Students expecting to attend the Regular Session are strongly recommended to attend the Preliminary Term, but attendance during the latter is not required. During the Preliminary Term clinical and didactic lectures will be given in precisely the same number and order as in the Regular Session.

The Regular Session will commence on Wednesday, October 3, 1877, and end about the 1st of March, 1878.

FACULTY.

ISAAC E. TAYLOR, M. D.,
Emeritus Professor of Obstetrics and Diseases of Women, and President of the Faculty.
JAMES R. WOOD, M. D., LL. D., FORDYCE BARKER, M. D.,
Emeritus Prof. of Surgery. Professor of Clinical Midwifery and Diseases of Women.

AUSTIN FLINT, M. D.,
Professor of the Principles and Practice of Medicine and Clinical Medicine.
W. H. VAN DYKEN, M. D.,
Professor of Principles and Practice of Surgery, Diseases of Genito-Urinary System, and Clinical Surgery.
LEWIS A. SAYRE, M. D.,
Professor of Orthopedic Surgery, Fractures and Dislocations, and Clinical Surgery.
ALEXANDER B. MOTT, M. D.,
Professor of Clinical and Operative Surgery.
WM. T. LUSH, M. D.,
Professor of Obstetrics and Diseases of Women and Children, and Clinical Midwifery.
EDMUND R. PEASLEE, M. D., LL. D.,
Professor of Gynecology.

WILLIAM M. POLK, M. D.,
Professor of Materia Medica and Therapeutics, and Clinical Medicine.
AUSTIN FLINT, JR., M. D.,
Professor of Physiology and Physiological Anatomy, and Secretary of the Faculty.
JOSEPH D. BRYANT, M. D.,
Lecturer on General, Descriptive and Surgical Anatomy.
R. OGDEN DOREMUS, M. D., LL. D.,
Professor of Chemistry and Toxicology.
EDWARD G. JANEWAY, M. D.,
Professor of Pathological Anatomy and Histology, Diseases of the Nervous System, and Clinical Medicine.

PROFESSORS OF SPECIAL DEPARTMENTS, ETC.

HENRY D. NOYES, M. D.,
Professor of Ophthalmology and Otolaryngology.
JOHN P. GRAY, M. D., LL. D.,
Professor of Psychological Medicine and Medical Jurisprudence.
EDWARD L. KEYES, M. D.,
Professor of Dermatology, and adjunct to the Chair of Principles of Surgery.

EDWARD G. JANEWAY, M. D.,
Professor of Practical Anatomy, (Demonstrator of Anatomy.)
LEROY MILTON YALE, M. D.,
Lecturer Adjunct upon Orthopedic Surgery.
A. A. SMITH, M. D.,
Lecturer Adjunct upon Clinical Medicine.

A distinctive feature of the method of instruction in this College is the union of clinical and didactic teaching. All the lectures are given within the Hospital grounds. During the Regular Winter Session, in addition to four didactic lectures on every week day except Saturday, two or three hours are daily allotted to clinical instruction.

The Spring Session consists chiefly of Recitations from Text-books. This term continues from the first of March to the first of June. During this session, daily recitations in all the departments are held by a corps of examiners appointed by the regular Faculty. Regular clinics are also given in the Hospital and College building.

FEES FOR THE REGULAR SESSION.

Fees for Tickets to all the Lectures during the Preliminary and Regular term, including Clinical Lectures,	\$140.00
Matriculation Fee,	5.00
Demonstrator's Ticket, (including material for dissection,)	10.00
Graduation Fee,	0.00

FEES FOR THE SPRING SESSION.

Matriculation, (Ticket good for the following Winter),	\$ 5.00
Recitations, Clinics and Lectures,	35.00
Dissection, (Ticket good for the following Winter,)	10.00

Students who have attended two full Winter Courses of lectures may be examined at the end of the second course upon Materia Medica, Physiology, Anatomy and Chemistry, and if successful, they will be examined at the end of their third course upon Practice of Medicine, Surgery and Obstetrics only.

For the Annual Circular and Catalogue, giving regulations for graduation and other information, address Prof. AUSTIN FLINT JR., Secretary, Bellevue Hospital Medical College.

HARVARD UNIVERSITY

MEDICAL DEPARTMENT, BOSTON, MASS.

Ninety-Fifth Annual Announcement---1878-79.

FACULTY OF MEDICINE.

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OTHER INSTRUCTORS.

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 CHARLES F. FOLSOM, M. D., } *Hygiene.*
 HENRY P. QUINCY, M. D., *Assistant in Histology.* GEORGE M. GARLAND, M. D., *Assistant in Physiology.*

The following gentlemen will give Special Clinical Instruction:

FRANCIS B. GREENOUGH, M. D., and EDWARD WIGGLESWORTH, M. D., *in Syphilis.*
 JOHN O. GREEN, M. D., and CLARENCE J. BLAKE, M. D., *in Otolology.*
 CHARLES P. PUTNAM, M. D., and JOSEPH P. OLIVER, M. D., *in Diseases of Children.*
 SAMUEL J. WEBER, M. D., and JAMES J. PUTNAM, M. D., *in Diseases of the Nervous System.*

Persons who hold no degree in arts or science must pass an examination for admission to this School, in Latin, in the elements of Physics, and in English. French or German will be accepted instead of Latin. The admission examination will be held June 24th both at Boston and at Cincinnati; on September 25d, at Boston only.

Instruction is given by lectures, recitations, clinical teaching, and practical exercises, distributed throughout the academic year. The year begins Sept. 26, 1878, and ends on the last Wednesday in June, 1879. It is divided into two equal terms, either of which is more than equivalent to the former "Winter Session," as regards the amount and character of the instruction. The course of instruction has been greatly enlarged, so as to extend over three years, and has been so arranged as to carry the student progressively and systematically from one subject to another in a just and natural order. In the subjects of anatomy, histology, chemistry, and pathological anatomy, laboratory work is largely substituted for, or added to, the usual methods of instruction.

Instead of the customary oral examination for the degree of Doctor of Medicine, at the end of the three years' period of study, a series of written examinations on all the main subjects of medical instruction is held at the end of each year; and every candidate for the degree must pass a satisfactory examination in every one of the principal departments of medical instruction during his period of study.

DIVISION OF STUDIES.

For the First Year.—Anatomy, Physiology, and General Chemistry.

For the Second Year.—Medical Chemistry, Materia Medica, Pathological Anatomy, Clinical Medicine, Surgery, and Clinical Surgery.

For the Third Year.—Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, and Clinical Surgery.

Students are divided into three classes, according to their time of study and proficiency. Students who began their professional studies elsewhere may be admitted to advanced standing; but all persons who apply for admission to the second or third year's class must pass an examination in the branches already pursued by the class to which they seek admission. The examinations are held in the following order:

At the end of the first year—Anatomy, Physiology, and General Chemistry.

End of second year—Medical Chemistry, Materia Medica, and Pathological Anatomy.

End of third year—Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, and Clinical Surgery.

Examinations are also held before the opening of the School, beginning September 23rd.

REQUIREMENTS FOR A DEGREE.—Every candidate must be twenty-one years of age; must have studied medicine three full years, have spent at least one continuous year at this School, have passed the required examinations, and have presented a thesis.

COURSE FOR GRADUATES.—For the purpose of affording to those already Graduates of Medicine additional facilities for pursuing clinical, laboratory, and other studies, in such subjects as may specially interest them, the Faculty has established a course which comprises the following branches: Histology; Physiology; Medical Chemistry; Pathological Anatomy; Surgery; Auscultation, Percussion, and Laryngoscopy; Ophthalmology; Dermatology; Syphilis; Psychological Medicine; Otology; Electro-Therapeutics; Gynecology; and Obstetrics. On payment of the full fee the privilege of attending any of the other exercises of the Medical School, the use of the laboratories and library, and all other rights accorded by the University will be granted. Single branches may also be pursued. Graduates of other Medical Schools who may desire the degree of M. D. at this University will be admitted to examination for this degree after a year's study in the Graduate's Course. Examination on entrance not required.

FEES.—For Matriculation, \$5; for the Year, \$200; for one term alone, \$120; for Graduation, \$30. For Graduates' Course, the Fee for one year is \$200; for one term, \$120; and for single courses such fees as are specified in the Catalogue. Payment in advance.

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THE BOSTON Medical and Surgical Journal.

ESTABLISHED 1828.--PUBLISHED WEEKLY.

The *Boston Medical and Surgical Journal* completes its Fiftieth Year with unusually bright prospects. The circulation having increased under its present management, efforts will be made to adapt it to its increased sphere of usefulness. Attention is called to certain changes which it has been found expedient to introduce during the coming year, and which, it is thought, will specially commend the *Journal* to the practical physician and surgeon.

Arrangements have been made to obtain a supply of clinical material in the shape of lectures and hospital reports from Boston, New York, Philadelphia, and Chicago. The clinics of the most prominent men in these cities will be selected for this purpose.

Several new departments are to be introduced in the Weekly Reports on the Progress of Medicine, including Orthopædic Surgery, Gynecology, Venereal Diseases, Dental Surgery, Forensic Medicine, Military Surgery, etc.

The correspondence of the *Journal* has been placed upon a secure and permanent footing, able writers having been selected to discuss subjects of medical interest at all important centers. Reports of local medical societies are secured from all parts of New England: all national societies are also carefully reported.

The editorial management will be under the control of Dr. J. Collins Warren, assisted by Dr. A. L. Mason, Dr. George B. Shattuck, and Dr. C. F. Folsom. It will still be the aim of the staff to make the editorial articles equal in value to those of the best weekly medical journals. Care will be taken to supply the latest and most interesting items of medical news.

As this journal endeavors to represent the practice of the country districts as well as of cities, contributions from both sources will be gladly received, and the interests of all will be supported with the impartiality to be shown only by a journal independent of any school or faction.

The following articles will appear early in the year:

A Lecture on the Antiseptic Treatment of Wounds. By Professor Henry J. Bigelow.

A series of Lectures on Clinical Surgery. By Professor David W. Cheever.

A Lecture embodying new views in the diagnosis of Ovarian Cysts. By Professor Danforth, of Chicago.

Contributions from the Dermatological Clinic of Professor James C. White.

Clinical Lectures on Diseases of the Larynx. By Dr. F. I. Knight.

Contributions from the Army Medical Museum. By Dr. George A. Otis, U. S. A.

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" "	1 gr.	- - -	2 15	{	Quin: Sulph:	1 gr.	{
" "	2 gr.	- - -	4 00		Ferri Redact:	1 gr.	
" "	3 grs.	- - -	6 00		Acid: Arsen:	1-50 gr.	
" "					Strychnia:	1-60 gr.	
PIL: ARSENIC et NUC VOMICE.			2 25	PIL: QUINLE et FERRI CARB.			2 25
{	Quinia: Sulph:	1 gr.	{	{	Quinine Sulph:	1 gr.	{
	Acid: Arsen:	1-60 gr.			Ferri Carb: (Vallet's)	2 grs.	
	Ext: Nuc Vom:	1-4 gr.					
PIL: QUINLE COMP:			2 25	PIL: QUINLE et FERRI LACT: COMP.			2 25
{	Quinia Sulph:	1 gr.	{	{	Quinine Sulph:	1 gr.	{
	Ferri Redact:	1 gr.			Ext: Ignat: Amar:	1-2 gr.	
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				PIL: QUINLE et FERRI et STRYCHINLE			2 25
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{	Cinchonid: Sulph:	1 gr.	{
	Ferri Redact:	1 gr.	
	Acid: Arsen:	1-50 gr.	
PIL: CINCHONIDLE COMP. et STRYCH.	1 25	PIL: CINCHONIDLE et FERRI CARB.	1 25
{	Cinchonid: Sulph:	1 gr.	{
	Ferri Redact:	1 gr.	
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" " " " 1-100 gr.	- - 1 00	{	{
" " " " COMP: - - -	- - 1 25		
{	Phosphori:	1-100 gr.	{
	Ext: Nuc Vom:	1-4 gr.	
PIL: PHOSPHORI COMP: et FERRI	- 1 25	PIL: PHOS. FERRI QUINIA et NUC. VOM.	2 75
{	Phosphori	1-100 gr.	{
	Ext: Nuc Vom:	1-4 gr.	
	Ferri Redact:	1 gr.	
PIL: PHOSPHORI et NUC VOMICEL.	- 1 25	PIL: ZINCI PHOSPHIDI et NUC. VOM.	1 00
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	Ext: Nuc Vom:	1-4 gr.	

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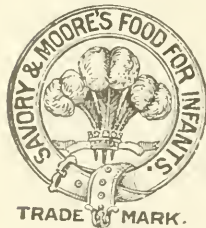
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1, Original Contributions. 2, Translations from the German, French and Spanish. 3, Reports of Medical Societies. 4, Clinical Reports from Private Practice. 5, Clinical Reports from Hospital Practice. 6, Selections from Current Medical and Scientific Literature. 7, Editorials. 8, Obituary Notices of Prominent Men. 9, Reviews of Medical and Scientific Books. 10, Notices of Books and Pamphlets Received. 11, News Items. 12, Meteorological Observations taken in St. Louis. 13, Mortality Report of the City of St. Louis. 14, Comparative Mortality Rates of the ten largest cities in the United States.

The Translations from the German, French and Spanish Medical and Scientific Journals, will be from those articles which contain the *advance* views of the Medical and Scientific men living in those countries.

THE JOURNAL will contain a full Report of the Proceedings of the St. Louis Medical Society, and a Summary of all the Societies in Missouri, and of many in Illinois and other States, thus placing before its readers the latest views and experiences of the profession in all the Departments of Medicine, Practical as well as Theoretical.

It will be the aim of the Editors, in all respects, to maintain the high and honorable position it has so long held. No personalities shall ever soil its pages; when discussions cannot be carried on without these, space in its columns will be declined.

Contributions of Original Articles on both Medical and Scientific subjects are invited from all parts of the country.

Articles on the following subjects will appear in the present volume:

Contributions on Fractures. By JOHN T. HODGEN, M. D., Professor of Surgical Anatomy, Fractures and Dislocations in St. Louis Medical College.

Contributions on Syphilis. By THOS. KENNARD, M. D., of St. Louis.

Contributions on Lithotomy. By DAVID PRINCE, M. D., of Jacksonville, Ill.

Contributions on Genito-Urethral and Rectal Surgery. By W. HUTSON FORD, M. D., of St. Louis.

Contributions on the Present State of Pathology of Phthisis Pulmonalis. A Series of Papers by J. HILGARD TYNDALE, M. D., of New York City.

Contributions on Genesis. A Series of Papers. By the Associate Editor.

Contributions on Urinary and Renal Diseases. By JOHN BRYSON, M. D., of St. Louis.

Contributions on Medical Experts as Witnesses. By FRED. T. LEDERGERBER, Esq., of St. Louis.

Contributions on Nasal, Pharyngeal, Aural, Laryngeal and Bronchial Diseases, By the Editor.

From the above it will be seen that it is not the intention of the editors to confine THE JOURNAL to subjects relating to Medicine and Surgery alone; subjects collateral to these will receive attention, and such are invited from the profession. The departments of science are so closely connected as to make it almost impossible for a Physician or Surgeon to be proficient as such, without considerable knowledge of kindred branches.

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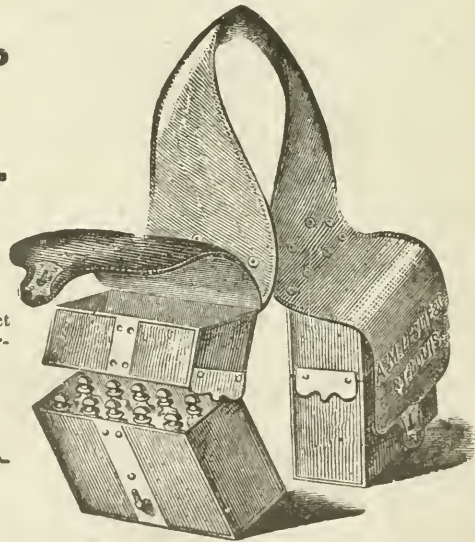
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